Paving of Internal Roads – Meskino “A” et “B” Eastmain

Specifications

TETRA TECH

Tetra Tech QI inc. reference : 34469TT
Cree Nation Government reference : 16114 – Lot 2018-203
June, 2018

Respect for the environment and the preservation of our natural resources are priorities for us. In order to encourage sustainable development, our documents are printed on both sides, unless otherwise instructed by our clients. An innovative gesture that creates value for future generations.

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SPECIFICATIONS

TETRA TECH QI INC. reference : 34469TT

CREE NATION GOVERNMENT reference : 16114 – Lot 2018-203

TETRA TECH QI INC.
4655 Wilfrid-Hamel Boulevard
Quebec City (Quebec) G1P 2J7

Tel. : 418 871-8151
Fax: 418 871-9625

Prepared by:

Lukas Turmel, Eng. jr

Verified and approved by:

INGÉNIEUR 06/06/2018 François Beaudoin 144086 QUÉBEC

François Beaudoin, Eng.

RELEASED FOR:	DATE
For comments 90%	December 2017
For tenders	June 2018

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO “A” ET “B”
EASTMAIN

TETRA TECH QI INC. REFERENCE : 34469TT

GENERAL TABLE OF CONTENT

[1] These documents are available from “Publications du Québec” and are part of this call for tenders.

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

INSTRUCTIONS TO BIDDERS

TETRA TECH QI INC.
4655 Wilfrid-Hamel Boulevard
Quebec City (Quebec) G1P 2J7

Tel.: 418 871-8151
Fax: 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE : 34469TT

TABLE OF CONTENT

1. GENERAL

The standardized administrative specifications NQ 1809-900/2002 and its modifications are an integral part of the present specifications.

This section refers to Part I of the standardized administrative specifications NQ 1809-900/2002.

This standard document is available from « Les Publications du Québec ».

The General Contractor must consider that the works have to be executed in accordance with the specifications mentioned in those reference documents. Precision and additions to those reference documents are specified in the following articles.

2. DOCUMENT REVIEW AND SITE VISIT

The following paragraph is added to item 1.2 of the *Instruction to Bidders* (NQ 1809-900-I/2002):

When establishing his price schedule, Bidders will take into account that some work, such as connecting water and sewer pipes, testing, etc., will take place outside of the usual business hours, that is in the evening or at night.

3. ADDENDUM

The following paragraph is added to item 1.6 of the *Instruction to Bidders* (NQ 1809-900-I/2002):

Regarding work of mechanical, electrical or other nature that must be submitted to the "Bureau des soumissions déposées du Québec" or BSDQ, the two (2) business day deadline to issue an addendum prior to the closing date of the call to tenders is extended to four (4) days.

4. PRICES AND UNITS

When establishing unit prices, Bidders will take into account that the quantities required to carry out the work, once completed, may vary from the quantities listed in the bid sheet.

Notwithstanding paragraph e) of item 1.4.1 of the *Instruction to Bidders* (NQ 1809-900-I/2002), the General Contractor will not renegotiate unit prices should the quantities listed in the bid sheet vary.

5. ADDITIONNAL INFORMATION

The following paragraph is added to item 4 of the Instruction to Bidders (NQ 1809-900-J/2002).

Each Bidder shall indicate in its bid, the names and addresses of proposed sub-contractors and suppliers and a brief description of the work entrusted to them or the materials ordered from them. The Bidders must inform the sub-contractors and suppliers of the conditions of the contract and ensure that they hold the required permits and ensure licenses and meet all other requirements under the contract.

6. BID VALIDITY PERIOD

Item 5.0 of the *Instruction to Bidders* (NQ 1809-900-I/2002) is replaced by the following:

Any bid or proposal is valid for a period of *ninety* (90) days from the submittal closing date.

Item 6.0 of the *Instruction to Bidders* (NQ 1809-900-I/2002) is replaced by the following:

Bidders can neither change nor withdraw his proposal in the *ninety* (90) days following the submittal closing date.

These deadlines are required in order to allow the Owner to finalize his administrative documents, if necessary, and to obtain all of the authorizations required for the awarding of the contract.

7. CONTRACTOR LICENCE

The required contractor licence must be attached to any submitted bid as per the *Building Act* (L.R.Q., c.B-1.1) in order for the contract to be executed. Failure to hold said licence when the contract is awarded will result in the rejection of the bid.

Prior to the awarding of the contract, the Owner may consult the licence holder's repertory of the Régie du bâtiment du Québec (RBQ) to verify if a restriction is associated with the contractor's licence, which could keep the holder from obtaining or executing the contract. If such a restriction exists, the bid will be rejected.

In addition, the Bidder who will be awarded the contract is responsible for ensuring that the provisions of the *Building Act* are respected in the subcontracting agreements they will enter into during the execution of the contract. The Owner will not be held liable in this respect and may require the successful Bidder to take any measure it deems appropriate should the law be violated, including the termination of subcontracts.

8. REQUESTS FOR INFORMATION

All requests for information, whether administrative or technical nature, related to this call for tenders will be submitted **in writing, using the form included in Appendix 1**, and sent to the person identified as sole sponsor for this call for tenders. The Owner will not be held liable with respect to any verbal information provided regarding documents related to this call for tenders.

9. COMPLIANCE AND CONFORMITY

The following paragraph is added to item 2.1 of the *Instruction to Bidders* (NQ 1809-900-I/2002):

The following documents must be provided along with the tender:

- Price schedule signed by the authorized person; to be considered valid, all tenders must be produced using the form provided with the tender documents.
- Signed addendum (if applicable);
- Bid bond or certified cheque in an amount equivalent to 10% of the value of the bid;
- Letter of commitment to provide a performance bond;

- Letter of commitment to provide labour and material payment bond;
- Copy of the Contractor's licence;
- Names and addresses of proposed sub-contractors and suppliers and a brief description of work entrusted to them or the materials ordered from them;
- Board of Directors' resolution (for legal entity) or a copy of Partnership Declaration and Shareholder Resolution (for a partnership).

END OF SECTION

APPENDIX 1

REQUEST FOR CONTRACT OR TECHNICAL INFORMATION FORM

Request for Contract or Technical Information

To be sent to the sole sponsor of the call for tenders at least five (5) business days before the closing date.

Client:	Cree Nation Government
Project:	Paving of Internal Roads – Meskino "A" et "B" Eastmain
Project Number:	34469TT

Sole sponsor of the call for tenders :	Cree Nation Government-Capital Works and Services 270, Prince Street, suite 202 Montreal (Québec) H3C 2N3 procurement@cngov.ca

Number and title of the tender specifications' item on which you need clarification: (mandatory inclusion)

Question (Please use a distinct form for every question)

The same answer (or addendum, if applicable) will be provided to everyone who requested a copy of the tender documents.

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

GENERAL CONDITIONS

TETRA TECH QI INC.
4655 Wilfrid-Hamel Boulevard
Quebec City (Quebec) G1P 2J7

Tel. : 418 871-8151
Fax : 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE : 34469TT

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1. GENERAL

The standardized administrative specifications NQ 1809-900/2002 and its modifications are part of the present specifications.

This section refers to Part II of the standardized administrative specifications NQ 1809-900/2002 and its modifications.

This standardized document is available from of « Les Publications du Québec .»

The General Contractor must consider that the works have to be executed in accordance with the specifications mentioned in those reference documents. Precision and additions to those reference documents are specified in the following articles.

2. DEFINITIONS

The following definitions are added to Article 1.1 of the *General Conditions* (NQ 1809-900-II/2002) :

Global Price, n. Equivalent to « lump sum price »

Contract, n. Equivalent to « deal »

Engineer or Architect or Consultant, n. Equivalent to « Project Manager »

Plans and specifications, n. All the documents listed in Article 1.2.1

Owner, n. Equivalent to **«** Client »

SÉAO « Système électronique d'appel d'offres » (Electronic Tendering System), n. Official tendering website approved by the government of Québec, it provides access to government contracting opportunities coming from most of Quebec public agencies, i.e. administration departments and agencies, agencies in education and health and social services networks, as well as municipalities and other municipal agencies. These public agencies have to use SEAO to publish their notices, distribute their tender documents and publish information on their contracts. Suppliers interested in government procurement can use the site to view published notices and purchase tender documents when they are distributed by SEAO.

3. UNDERSTANDING

The following paragraphs are added to Article 1.2 of the *General Conditions* (NQ 1809-900-II/2002) :

1.2.6 Deal documents replace every communication, negotiations and agreements, written or verbal, which preceded its notification date.

1.2.7 The signed contract between the maître de l'ouvrage and the General Contractor has priority over any other documents.

1.2.8 A verb used in the infinitive form starting a phrase or a clause implies the words « The General Contractor must… ». For example, the words « Supply and install… » mean, « The General Contractor must supply and install… ».

Article 1.2.3 of the *General Conditions* (NQ 1809-900-II/2002) is replaced by the following :

1.2.3 Norms and documents given as reference in the documents of the present deal are considered as part of it, as if they were completely included in it.

4. SOIL CONDITIONS

Article 1.4.2 of the *General Conditions* (NQ 1809-900-II/2002) is replaced by the following :

1.4.2 The information concerning the nature and depth of the layers of soil must be considered accurate only at the borehole or test pit location. All interpretation on the nature of the soil between two (2) boreholes or test pits remains the General Contractor's responsibility.

The General Contractor must hire his own experts to determine the complexity and techniques of construction as well as the nature of the soils between two (2) boreholes or test pits if deemed necessary.

Where the works must take place and where no study has been made, the General Contractor will be in charge of determining the soil's nature and no additional sum will be granted for excavation due to the fact that the soil's nature wasn't determined in the bid's documents.

5. EXISTING STRUCTURES

Article 1.5.3 of the *General Conditions* (NQ 1809-900-II/2002) is replaced by the following :

1.5.3 Unless specified otherwise elsewhere in the deal's documents or if the existing structure to protect are not shown on the plans and are not detectable by a serious work site examination, all the necessary protection measures and the rehabilitation of the existing structure are at the expense of the General Contractor. He is in accountable for every damage caused by the Work.

The following paragraph is added to Article 1.5 of the *General Conditions* (NQ 1809-900-II/2002) :

1.5.4 The General Contractor must confirm the location of underground utilities prior to the beginning of the work by digging exploratory hole.

6. PROJECT MANAGER'S AUTHORIZATION

The following paragraph is added to Article 4.1.1 of the *General Conditions* (NQ 1809-900-II/2002) :

f) Demand all change in the General Contractor's staff or his subcontractor's staff for incapacity or indiscipline's reasons.

7. EXECUTION OF THE WORK

The following paragraph is added to Article 4.2 of the *General Conditions* (NQ 1809-900-II/2002) :

4.2.3 The value of those works is entirely included in the bid's prices per unit.

8. EXECUTION AND ASSEMBLY DRAWINGS

The following paragraph is added to Article 4.4 of the *General Conditions* (NQ 1809-900-II/2002) :

4.4.4 Corrections or comments made by the Project Manager on the drawings does not exempt the General Contractor from his duty to abide by the requirements of the bid's documents. The control only assures the general conformity of the conception and the steady application of the data prescribed in the contract. The General Contractor is responsible for confirming and correlating all quantities and dimensions, choose the manufacturing and construction techniques, and execute his work safely.

4.4.5 The General Contractor must also refer to Section 01340 of the present contract's Supplementary Technical Conditions to know the procedures to be followed for presenting the shop drawings and temporary works drawings.

9. CHANGE ORDERS

The following paragraph is added to Article 4.7 of the General Conditions (NQ 1809-900-II/2002) :

4.7.6 Cree Nation Government may require the payment of weekly site surveillance fees of $1500/week and for office supervision of $6500/week if the general contractor or its sub-contractors do not complete all or part of the work within established contractual schedule. Change orders which are accepted by Cree Nation Government will indicate impacts on the construction schedule which are to be taken into account for the application of this particular contractual condition.

10. CONSTRUCTION CONTRACT

The last sentences of Article 4.6.4 and 4.6.5 of the *General Conditions* (NQ 1809-900-II/2002) are withdrawn and replaced by the following sentence :

- Fees will not be refunded for those items by the Project Manager.

11. TRAFFIC MAINTENANCE

The following paragraphs are added to Article 4.11 of the *General Conditions* (NQ 1809-900-II/2002) :

4.11.5 If the Project Manager sees it fit because of the local conditions or the scale of the Work, the General Contractor must, before the beginning of the Work, present a general plan at scale 1:20000 and 1:2000 on which appear the following elements :

- Work areas;
- Bypass road
- Deviation path/ temporary path
- Road signalling.

Furthermore, he must provide the following documents :

- The Forms (notice to the local residents);
- Authorizations, licences and/or agreement reached.

Those documents including the general plan must be approved by the Project Manager before the General Contractor can start his works.

4.11.6 While the Work is in progress, The General Contractor must signal by proper signs the quickest way to bypass the Work site. Also, he must shorten the length of the Work to minimize the harm on the residents of the area. The General Contractor will have to allow traffic flow on any part of the road where the Work is partially or totally completed to re-establish normal traffic flow as soon as possible.

4.11.7 The General Contractor must assume full responsibility of any damage, delay or accident due to a defect or lack of means of signs, temporary or not, provided for the public. This responsibility also extends to any damage that, for any of those reasons, could affect the works underway.

4.11.8 The General Contractor must apply, at his own expense, a dust control liquid to limit as much as possible dust inconvenience for the citizens and road users.

12. PRICE INDEXATION

Articles 5.4.2 and 5.4.3 of the *General Conditions* (NQ 1809-900-II/2002) are replaced by the following texts :

5.4.2 After the bid opening, the General Contractor won't be entitled to any compensation concerning increase of the workforce, materials, transport and/or fuel cost, even if those increases are a result of any law, regulation, decree, disposition enforced by the competent authorities or any fluctuation of petroleum products or their derivatives. It is therefore its responsibility to anticipate and include in their price per unit or lump sum price any increase in cost that can occur during the execution of the works.

13. SPECIFIED MATERIALS

The following paragraph is added to Article 6.1 of the *General Conditions* (NQ 1809-900-II/2002) :

6.1.4 For equivalent material, the General Contractor must refer to Article 6.5 of the *General Conditions (NQ 1809-900-II)*.

14. MATERIAL SUBSTITUTION

The following paragraphs are added to Article 6.3 of the *General Conditions* (NQ 1809-900-II/2002) :

6.3.6 To assure that the bid's base is the same for every bidder, the General Contractor must present its bid with the products specified on the call for tenders' documents. Failing this, its bid will be rejected.

6.3.7 The General Contractor must refund all costs incurred by the Project Manager related to the requests for substitutions, in accordance with Decree 1235-87 – Tariff of fees :

Professionals fees required to analyze the requests for substitutions or equivalence will be deducted from the amount owe to the General Contractor, via monthly progress payment.

15. EXISTING STRUCTURES AND PUBLIC GOODS

The following paragraphs are added to Article 7.4 of the *General Conditions* (NQ 1809-900-II/2002) :

7.4.4 The General Contractor has to plan and arrange a temporary driveway for the local residents during the Work. If he cannot close back the cutting at the end of every shift to allow the local residents access to their property, the General Contractor must arrange a temporary pontoon above the trench or another driveway.

7.4.5 If an interruption of the water supply and sewer system is necessary, the General Contractor must inform the concerned city 48 hours in advance and must conform to the procedure it decreed.

7.4.6 The bid prices must consider that some works such as water, sewer, test pipes coupling could have to be executed outside of the regular work hours, that is in the evening or at night to avoid disturbing public services.

16. DISPOSAL OF OBJECTS, SUBSTANCES, PRODUCTS AND OTHERS

The following paragraph is added to Article 8.2 of the *General Conditions* (NQ 1809-900-II/2002) :

Unless the client does not want to keep them, all the recoverable accessories (valves, fire hydrants, accessories, mechanical equipment, pipes, etc.) will be given back to him and delivered, without any cost, to the location of his choice.

17. CLEANLINESS OF THE SITE

The following paragraphs are added to Article 8.4 of the *General Conditions* (NQ 1809-900-II/2002) :

8.4.5 To limit harm to residents and drivers, the General Contractor must, without delay, clean soiled surfaces surrounding the work site. The areas took by the trucks must be watched and maintained by the General Contractor to prevent deposits of dirt from forming. At the end of the works, the work site and its periphery must be perfectly clean to the satisfaction of the Project Manager and the Owner. Failure to fulfil these obligations, the client will clean to the General Contractor's expense.

8.4.6 In dusty places, regularly apply a dust suppressant to minimize the inconvenience to the residents of the lands neighbouring the work site or close to the traffic lanes used by its vehicles.

8.4.7 Streets cleaning include draining the catch basin soiled by the works.

18. PROGRESS PAYMENT

The following paragraphs replace the Article 9.1 of the *General Conditions* (NQ 1809-900-II/2002) :

9.1.1 Payment for the works completed will be paid upon receipt of an original paper copy of the invoice to the Capital Works and Services (Montreal office), upon following the payment process explained below and upon receipt of mandatory documents as described below.

9.1.2 Invoices will be produced on a monthly basis and will cover the works completed from the first day of the month up to the last day of the month.

9.1.3 The payment progress is defined as follows :

a) The General Contractor will produce monthly invoices indicating the completed works as per the bidding form and the invoice will have to be approved by the Engineer who will then produce a certificate of payment.

b) Once the certificate of payment is issued, the General Contractor will produce its invoice and will forward the original paper copy to the Owner.

c) The Owner will accept electronic copies of invoices at cws.reception@cngov.ca as to expedite review and treatment of submitted invoices. In this case, electronic copies of invoices and supporting documents must also be issued to the Project Manager.

d) The Owner will generally pay the invoices within thirty (30) days upon receipt of the original paper copy as per the certificate of payment issued by the Engineer.

e) The General Contractor may provide to the Owner its banking information so that automatic banking transfer payment may be done. Otherwise, payment by cheque will be mailed to the General Contractor.

9.1.4 The following documents must be provided with each invoice prior to initiate payment :

a) Certificate of payment by the Engineer

b) At least 10 pictures supporting the completed works out of which at least 2 are showing the work site globally – these pictures should also be emailed to the Engineer

c) Updated work schedule

d) Quittance from sub-contractors and suppliers (if applicable)

e) Monthly breakdown of Cree manpower and use of Cree sub-contractors (use the report sheets in appendix 1 for non-construction workers and provide monthly manpower reports submitted to the Commission de la Construction du Québec (CCQ) including those for each subcontractors)

f) Special reporting requirements for contracts over 2 000 000 $ (if applicable).

9.1.5 The progress payment should not under any circumstance be considered as an acceptance of the works which are subject to the payment.

19. HOLDBACK

The following paragraph is added to the first paragraph of Article 9.2.1 of the *General Conditions* (NQ 1809-900-II/2002) :

This holdback is not limiting. Thereby, the client reserve the right to retain the necessary sum of money to protect himself against the registration of any privilege, to meet its obligations towards its subcontractors who could claim some payments, to guarantee payment of the General Contractor's required contributions for accidents and employment insurance or other similar regulations and to pay the disbursements incurred by the client due to omissions and negligence to abide by the Contract responsibility from the General Contractor.

Furthermore, in addition to the holdback made to every progress payment (10 %) and to the one retained at provisional acceptance (5 %), the client reserves the right to apply an additional holdback to assure execution of the repairs.

20. PROVISIONAL ACCEPTANCE OF THE WORKS

Paragraph 9.3.5 of the *General Conditions* (NQ 1809-900-II/2002) is replaced by :

9.3.5 The works are provisionally accepted if, according to the Project Manager, the expected works are fully completed and if all defects are fixed.

The following Article 9.3.12 and 9.3.13 must be added to Article 9.3 of the General Conditions (NQ 1809-900-II/2002) :

9.3.12 The works are not provisionally accepted before the reports including the results of all the required tests are handed to the Project Manager.

He then reserves the right to take a three (3) weeks delay to get acquainted with the results and to establish the defective works list, if need be.

9.3.13 The electronic file of the « as build » drawings must be provided to the Project Manager before the works are provisionally accepted.

21. GUARANTEE PERIOD

The following paragraph is added to Article 9.5 of the *General Conditions* (NQ 1809-900-II/2002) :

9.5.3 The General Contractor has the responsibility to obtain from the suppliers and to provide to the Owner every certificate concerning the applicable guarantees of mechanical and electrical materials in accordance with the Contract's stipulations.

END OF SECTION

APPENDIX 1

MONTHLY BREAKDOWN OF CREE MANPOWER AND USE OF CREE SUB-CONTRACTORS REPORT SHEETS

Monthly breakdown of Cree manpower

Dates Form:

To:

Contractor/Worksite:

Name of Cree employee / employer	Trade	Number of hours
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
Summary	**Cree workers**	**Non-Cree workers**
Number of workers		
Total number of hours		
Percentage over the total amount of workers		
Percentage over the total number of hours		

- Use additional sheet if required.
- The manpower from the contractor and its sub-contractors must be included in this report.

Monthly report on Cree sub-contractors

Dates Form:

To:

Contractor/worksite:

Name of sub-contractors	Cree sub-contractors	Value of contract done this month	Total value of contract
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Summary	**Cree sub-contractors**	**Non-Cree sub-contractors**	
Total value of contract this month			
Total value of contract			
Percentage over the total amount this month			
Percentage over the total			

- Use additional sheet if required.

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

WARRANTIES AND INSURANCE

TETRA TECH QI INC.
4655, Wilfrid-Hamel boulevard
Quebec City (Quebec) G1P 2J7

Tél. : 418 871-8151
Fax : 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE : 34469TT

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1. GENERAL

The standardized administrative specifications NQ 1809-900/2002 and its modifications are an integral part of the present specifications.

This section refers to Part III of the standardized administrative specifications NQ 1809-900/2002.

This standardized document is available from « Les Publications du Québec ».

The General Contractor must consider that the works have to be executed in accordance with the specifications mentioned in those reference documents. Precision and additions to those reference documents are specified in the following articles.

2. PERFORMANCE BOND AND OBLIGATIONS LABOUR AND MATERIAL PAYMENT BOND

This article replace the first paragraph of Article 1.2 of the *Warranties and Insurance* (NQ 1809-900-III/2002) :

At the signing of the contract, the General Contractor must replace his bid bond by his performance and his labour and material payment warranties for salary, materials and services. Those warranties are in the form of a bonds.

They will be exchanged for :

- Performance bond representing 50% of the amount of the contract and;
- Labour and material payment bond equalling 50% of the amount of the contract.

The insurance company name must appear on an up-to-date list of the insurers available at the website of the Inspector General of Financial Institutions: www.lautorite.qc.ca.

3. INSURANCE

Article 2 of the *Warranties and Insurance* (NQ 1809-900-III/2002) is completed by the following paragraph:

The insurance company name must appear on an up-to-date list of the insurers available at the website of the Inspector General of Financial Institutions: www.lautorite.qc.ca.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

GENERAL TECHNICAL CONDITIONS

TETRA TECH QI INC.
4655, Wilfrid-Hamel boulevard
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JUNE 2018
TETRA TECH QI INC. REFERENCE : 34469TT

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1. GENERAL

Some sections of the Supplementary Technical Conditions refers to NQ-1809-300/2004 (R 2007) and its modifications (M1 and M2) and/or to the « Cahier des charges et devis généraux (CCDG) », edition 2018, of the Ministère des Transports, de la Mobilité durable et de l'Électrification des transports du Québec (MTMDET).

The standardized document NQ-1809-300/2004 (R 2007), as well as the « Cahier des charges et devis généraux (CCDG) », are available from « Les Publications du Québec ».

The General Contractor must consider that the works have to be executed in accordance with the general specifications mentionned in those reference documents. The limitations and scope of those reference documents are however clarify in the various sections of the Supplementary Technical Conditions.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY GENERAL CONDITIONS

TETRA TECH QI INC.
4655, Wilfrid-Hamel boulevard
Quebec City (Quebec) G1P 2J7

Tél. : 418 871-8151
Fax : 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE: 34469TT

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1. CONTRACT SCOPE

This contract covers the execution of the following work:

- Aggregate production for paving works (2018);
- Paving of Meskino A and B on a length of approximately of 560 meters;

The work is to be executed on behalf of the Cree Nation Government and Cree Nation Eastmain.

All of the work includes the usual accessories and repairs to existing structures damaged or affected during construction.

The work includes, among others, the following:

a) Work site organization and signage;

b) Excavation, backfilling and earthworks;

c) Asphalt aggregate production;

d) The construction of curbs;

e) Aggregate preparation prior to paving;

f) Asphat paving;

g) Landscaping and repairs;

h) Repairs to existing structures, land or properties or land damaged or disturbed as a result of construction;

i) All other work required in the documents.

2. BID DOCUMENTS

The bid documents are available via the "Système électronique d'appel d'offres" or SÉAO and cannot be obtained from another source.

Parties interested in submitting a bid will obtain all of the tender documents (including submitted questions and answers) via the SÉAO.

Bidders will view the documents listed below as requirements for the submittal of their tenders:

.1 Call for tenders issued by the Cree Nation Government.

.2 Specifications including:

- Instructions to bidders;
- General Conditions;
- Warranties and Insurance;
- General Technical Conditions:
  - Water and Sewer Pipes (BNQ 1809-300/2004 (R2007));
  - Road Infrastructures (CCDG, edition 2018);
- Supplementary General Conditions;
- Supplementary Technical Conditions;
- List of Plans;
- Tender Form.

.3 Plans, cross-sections and typical details (refer to the List of Plans).

.4 Any addendum or other document issued by the SÉAO.

The Contract Documents provided to the Bidder by the CNG are confidential, shall remain the sole property of the CNG and may not be used outside the context of this Call for Tenders without the CNG's prior written consent.

3. DEFINITIONS

The following terms apply to this contract:

a) Client and/or Owner

Cree Nation Government
2, Lakeshore Road
Nemaska (Quebec) J0Y 3B0
Tel. : (819) 673-2600
Fax : (819) 673-2606

Cree Nation of Eastmain
76, Nouchimi, boîte postale 90
Eastmain, (Québec) J0M 1W0
Tel. : (819) 977-0211
Fax : (819) 977-0281

b) Engineer

TETRA TECH QI INC.
4655, Wilfrid Hamel Boulevard
Quebec City (Quebec) G1P 2J7
Tel. : (418) 871-8151
Fax: (418) 871-9625

Throughout the plans and specifications, read "Engineer" as defined in item "Definitions" of the General Conditions, in place of the following terms: architect, consultant, supervisor and any other similar terms.

c) Principal contractor for the purpose of the Act Respecting Occupational Health and Safety: **General Contractor**.

d) Global

The terms "global" or "global price" are equivalent to "lump sum".

Throughout the plans and specifications, the terms "Engineer", "Architect", "Consultant" or any other similar terms should read "Owner or his authorized representative".

4. THIRD PARTY LIABILITY AND AUTO INSURANCE

The General Contractor will comply with the requirements of Part III of the NQ 1809-900 standard of the General Conditions entitled warranties and insurance. In addition, the General Contractor will add the following as insured parties in his insurance policy: Cree Nation Government, Cree Nation of Eastmain and Tetra Tech QI Inc. However, the insurance guarantee for third party liability insurance and automobile insurance will amount to $2,000,000 instead of $1,000,000.

All fees related to insurance will be at the expense of the General Contractor.

5. AWARDING OF THE CONTRACT

Prior to the signature of the contract, the Owner reserves the right to remove one or several portions of the work, depending on the budget at his disposal. The General Contractor will not claim any additional expense caused by the removal of one or several portions of the work. The Owner is not obligated to accept the lowest bid or any other bid received.

6. EXECUTION SCHEDULE

6.1 AWARDING OF THE CONTRACT

The General Contractor will produce his schedule diligently, while taking into account that the awarding of the contract will take place within the period of time indicated in item "Bid Validity Period" of the "Instructions to Bidders".

The General Contractor will begin work as soon as the authorization from the Engineer is received and will continue said work without interruption until completion.

6.2 GENERAL EXECUTION SCHEDULE

The General Contractor will complete the work (including the correction of deficiencies until the final acceptance of the work) by 2019 september at the latest. However, the aggregate production must be completed befor 2018 november 1st. The General Contractor will therefore use all of the labour necessary to meet this deadline, including the use of more than one main work team.

7. DAMAGES

7.1 DAMAGES FOR NON COMPLIANCE WITH THE EXECUTION SCHEDULE

If the execution deadlines for one or several portions of the work or for the entire work mentioned previously are not respected, the General Contractor will pay Cree Nation Government a set amount per day of delay as compensation for additional expenses incurred for construction monitoring (Engineer, laboratory, etc.), i.e.:

- $2,000 per day of delay for the delivery of the entire work (refer to item 6.2 of these Supplementary General Conditions);

All other costs incurred by exceeding the time limit for the Owner will also be paid by the Contractor.

For calculations purposes, one (1) day of execution is equal to a 10-hour work day.

The General Contractor will note that the monetary compensations mentioned above will be strictly applied and will be cumulative for each situation described in this item.

8. DEFINITION OF A "DAY OF EXECUTION"

For the purposes of this contract, one day of execution consists of a minimum of three (3) hours of work at the site.

9. WORK SCHEDULE

The maximum work schedule consists of 10-hour days and 70 hours per week. The General Contractor will pay for construction site supervision activities exceeding 70 hours per week. If the General Contractor is required to work during statutory holidays, construction site supervision will also be at his own expense, even if the total hours do not reach the 70-hour mark, and paid directly to the Owner, so that the Engineer can be paid. In addition, if the General Contractor wishes to work during statutory holidays, he will submit a written request at least 48 hours in advance and indicate where he intends to work.

In such cases, the construction site supervision expenses will be paid based on the salary of the Supervisor in accordance with the decree entitled "*Décret 1235-87 - Tarif d'honoraires pour services professionnels fournis au gouvernement par des ingénieurs" (engineering professional fees provided to the government and established by decree)*, increased by 50%.

10. SCHEDULE OF EXECUTION

The General Contractor will provide a work schedule (timescale) in accordance with the requirements of article 4.5 "Calendrier des travaux" (work schedule) of the NQ 1809-900-II/2002 standard.

The execution schedule will take into account the fact that all of the work must be completed within the deadlines mentioned in the items above.

When preparing the work schedule, the General Contractor will also consider to the following items, among others:

- Constraints related to mobilizing staff and equipment;
- Equipment fabrication and delivery delays;
- Shop drawings production and approval delays;
- Constraints related to traffic maintenance;
- Constraints related to the use of local labour;

- Weather constraints associated with the project area;
- Constraints related to concurrent work.

11. RESPONSIBILITIES OF THE GENERAL CONTRACTOR

The General Contractor will cooperate fully with the Engineer during the verification and supervision of the work. He will facilitate access to the construction site and structures at all times, and he will notify the Engineer in a timely manner regarding the inspection of the works.

The General Contractor will reimburse the Owner all of the expenses incurred by the latter as compensation for damages and/or for any additional work generated by the General Contractor or due to failure, incapacity or negligence, whether through action or omission to fulfill his contractual obligations.

Additional work generated by the Engineer includes all tasks not included in his normal scope of work. Such tasks include, among others:

- The analysis of any request for a product or material equivalent to that which was included in the specifications;
- A revision of the tender documents to adapt to a request for modification or equivalence;
- Any additional verification after an initial verification of the work where said work was found to be deficient or unacceptable;
- The coordination of the work of sub-contractors or suppliers if the General Contractor fails to perform said coordination;
- Technical or administrative assistance to the General Contractor if the latter finds it difficult to fulfill the contractual obligations related to this project.

The expenses charged to the General Contractor for additional work by the Engineer or his representative (laboratory, supervisor, etc.) will be considered professional fees and will include the time spent working at the construction site, in the office and traveling, as well as travelling and living expenses. The expenses will be deducted directly from the sums due to the General Contractor. They will be calculated on the hourly basis established by decree ("Décret 1235-87 - Tarif d'honoraires pour services professionnels fournis au gouvernement par des ingénieurs").

12. SELECTION OF SUB-CONTACTORS, SUPPLIERS AND MACHINERY RENTAL SERVICE PROVIDERS

In addition to trucks that must be owned by Eastmain Community Truckers, the General Contractor is entirely responsible for the selection of sub-contractors, suppliers and rental service suppliers, as well as for complying with the legislation and regulations applicable to these elements in construction sector.

13. LOCAL LABOUR

The General Contractor is entirely responsible for the selection of labour and for complying with the legislation and regulations applicable to the labour management in the construction sector.

The Cree Nation Government strongly encourages the hiring of Cree construction workers with journeyman and apprentice Commission de la construction du Québec (CCQ) cards as :

« Malgré l'article 35, pour les travaux effectués à la Baie-James ou au Nunavik, la priorité d'embauche est d'abord respectivement accordée aux autochtones qui y sont domiciliés et qui sont des candidats salariés titulaires d'un certificat de compétence-compagnon, de compétence-occupation ou de compétence-apprenti, selon le cas, délivré par la Commission. La même priorité est accordée partout ailleurs aux autochtones détenant un tel certificat pour les travaux effectués dans la réserve ou l'établissement où ils sont domiciliés ».

The Cree Nation Government also strongly encourages the hiring of Crees as apprentice. As such, the *Commission de la construction du Québec (CCQ)* may issue apprentice cards for most of the construction trades to Crees even without the formal training pre-requisites, except for electricians.

The Cree Nation Government invites the contractors and the subcontractors to contact the *Commission de la construction du Québec (CCQ)* for any information about at the following coordinates:

Jacynthe Poulin
AGENTE DE LIAISON
DIVERSITÉ DE LA MAIN-D'OEUVRE ET DÉVELOPPEMENT
TÉL. : 819-354-5412
FAX : 819-825-2192
COURRIEL : jacynthe.poulin@ccq.org

14. PLANS AND SPRECIFICATIONS COPY

After the awarding of the contract, the Engineer will provide the General Contractor with of the plans and specifications for construction (revision "For Construction").

The General Contractor will ensure that older copies of the plans and specifications are not used at the construction site or to order materials.

15. INTERPRETATION

Unless otherwise specified, references to the "Cahier des charges et devis généraux" or CCDG (general conditions and specifications) pertain to Parts 2 and 3 only of the CCDG issued by the MTMDET, for the edition indicated in the General Technical Conditions of these specifications.

16. MANUFACTURER RECOMMANDATIONS

Materials or equipment parts will be installed or operated in strict accordance with the most recent written instructions and recommendations from manufacturers, unless otherwise indicated in the bid documents. If the bid documents do not show the fittings or connection details for the installation of a device, the recommendations of the manufacturer will apply for installation, and these fittings and connectors will be part of the bid documents as if they had been mentioned there specifically.

17. SECTIONS OF THE SUPPLEMENTARY TECHNICAL CONDITIONS

Les Supplementary Technical Conditions have been divided into sections to represent various types of work to be performed. These sections only aim at facilitating familiarization with the specifications. They do not aim at defining the work of the sub-contractors. The General Contractor remains solely responsible for the execution of the entire work and for the work coordination he may delegate to sub-contractors. The General Contractor will consider the plans and specifications as a whole for the work to be executed and will not be paid additional sums due to confusion among sub-contractors regarding the work they are to carry out.

18. ERRORS OR OMISSIONS

Should the General Contractor find conflicting information between the plans and the local physical conditions or errors or omissions on the plans in the course of construction, he will immediately notify the Engineer in writing, failing which he will proceed at his own risk until the authorization from the Engineer is received.

19. WEATHER CONDITIONS

The General Contractor will not claim any additional amount of money in relation with adverse weather conditions. He will plan the work based on conditions likely to occur during construction and he will include in his bid the amounts likely to be required for snow removal, excavation in frozen ground, the replacement of frozen backfilling materials with compliant materials, rain, new work to correct deficiencies caused by the weather, the insulation of some structures or devices (temporary water supply, concreting), etc.

20. SOIL CONDITIONS

The General Contractor is hereby notified that he is responsible for the excavation, removal and disposal of any material encountered and for the dewatering of the trenches.

In accordance with item soil conditions of the General Conditions, the General Contractor will hire his own experts to identify the issues and select the construction methods, while taking into account the following items, among others:

- Existing buildings and/or structures to be protected during excavation, including, without being limited to, public utility poles;
- The necessity to ensure safe passage to residents and emergency vehicles (ambulances, fire trucks, medical house calls, etc.).

The General Contractor will therefore use all methods required to avoid the destabilization of slopes and existing structure and to keep the excavation walls stable, including, among others, pumping, shoring, and trench boxes.

Should the General Contractor decide to verify himself the nature of the soils at the site, he will first obtain written authorisations from the owner and notify Cree Nation of Eastmain so that a representative can be in attendance.

21. CONCURRENT WORK

The General Contractor must consider that the roadworks on Meskino A et B will be completed only from August 2018. The housing units will be built as soon as the roadworks will be completed.

The General Contractor will coordinate his work with that of other contractors in order to avoid any conflict. Claims of any nature regarding concurrent work will not be accepted and the General Contractor will include in his price all related direct and indirect costs, including coordination.

22. BULK HAULING

22.1 GENERAL

The Contractor and its subcontractors must use trucks belonging to Eastmain Community Truckers at all times. This requirement applies to the transportation of all bulk materials, from their original and primary source entering the site, as well as scrap and excavation and backfilling materials.

22.2 TRUCK COVERS FOR THE TRANSPORTATION OF ASPHALT

As described in article 13.3.3.4 of the CCDG, truck boxes used for the transportation of asphalt will be equipped with tarps, in accordance with the provisions of that article.

The tarp will be pulled over the load and kept in this position for the entire duration of transport in order to keep the mix from cooling too quickly. The tarp pulling mechanism will comply with this requirement.

The General Contractor will manage this requirement with the local truckers. At the loading area, he will make sure that all of the trucks that will be used to transport the asphalt will comply with this requirement.

If any non-compliance of this requirement is observed by the supervisor, the truck and its load will be turned away and $200 per day will be permanently withheld from payment to the General Contractor.

23. PRICES INDEXATION

Under no circumstances will the General Contractor change the prices written in the contract. It is stipulated that this prices will not be modified due to the cost increase or decrease, whether actual or alleged, of salaries, taxes, labour, fuel, materials, machinery, facilities or materials, or any other fees from the General Contractor.

24. TRAFFIC MAINTENANCE AND SIGNS

This article complements article 4.11 of the General Conditions (NQ 1809-900II/2002), article 11 "Traffic maintenance" of the General Conditions and section 02847 of the Supplementary Technical Conditions. Prior to the beginning of construction, in other words immediately after the awarding of the contract, the General Contractor will produce a work schedule and a global plan (scale 1:2000), which will include the following items:

- Work areas;
- Detours and/or temporary roads for municipal streets;

- Road signs (for vehicles and pedestrians.

The global plan will be approved by the Engineer before the General Contractor begins work.

Before the start and during construction, the Contractor must provide a safe passage for residents the public, garbage and recyclable materials collection trucks as well as emergency vehicles (fire trucks, ambulance, etc.). It must take all necessary measures to facilitate and protect traffic on the streets where the work is carried out, on the bypass roads and on the temporary traffic lanes. He must also maintain traffic on the access Road at all times to preserve access to the Community's wastewater treatment plan.

At any location where there is a risk of accident or damages to the structures, whether caused directly or indirectly after construction, the General Contractor will implement sufficient and appropriate road signs for the entire duration of construction or as long as the Engineer deems it necessary, in accordance with the general instructions related to road signs in the province of Quebec, as indicated in "Tome V des normes du ministère des Transports" (book V of the MTMDET's standards), with the requirements of the Regulation respecting road signs (Highway Safety Code, L.R.Q. c.C.-24.2, a.289) and with the relevant requirements of Cree Nation GovernmentCree Nation of Eastmain. Particular attention will be paid to the immediate removal of any road signs no longer needed.

If the General Contractor fails to provide the adequate road signs required by the Highway Safety Code (L.R.Q., c.C.-24.2, a.303), the Owner may dispatch a work team without previous notice to install the required road signs or to remain on site until the General Contractor installs appropriate signage. Related expenses will be invoiced to the General Contractor.

The cost related to this provision include the supply of material (including borrow material), material and labour to manage traffic and all direct and indirect expenses, all of which will be included in the price schedule as unit prices or lump sums.

25. CEMENT CONCRETE CONTROL AT THE CONSTRUCTION SITE

The General Contractor is responsible for the initial curing of molded concrete at the construction site and for the cement concrete tubes for compressive strength and flexural strength tests. To that effect, he will provide temperature and moisture controlled facilities at the construction site for the purpose of preservice the tubes in the conditions described in standards CSA A23.1 and A23.2. These facilities will be approved by the General Contractor's cement concrete supplier. Failure to provide compliant facilities will render any recourse by the General Contractor null and void in terms of penalties related to non-compliant strengths.

26. CONCRETE PROTECTION IN COLD WEATHER

Given the execution deadlines of this contract, complementary protection measure may be required when concreting in cold weather. In such cases, the General Contractor will respect all of the requirements included in section 02580 of the Supplementary Technical Conditions in terms of execution, and he will include the costs related to concrete protection in order to achieve an optimum curing in the unit price or lump sum related to concrete structures.

27. WATER MANAGEMENT

In order to avoid damages to properties, buildings, road surfaces and other structures, the General Contractor will include in his bid price all of the drainage necessary to control, divert and evacuate stormwater and runoff. In addition, he will ensure the necessary temporary drainage and pumping to keep the excavations and construction site dry.

The General Contractor will select working methods that will prevent any wastewater spills in the environment during construction.

28. MATERIALS MANAGEMENT

The General Contractor will manage excavated materials in such as way as to reuse the maximum amount of material at the site. Excavating will be executed before trenching and the excavated materials, such as topsoil, reusable materials and waste materials, will be separated.

To that effect, proceed with the following work, if required and as instructed by the Engineer:

- Transport of excavated materials to the storage reserve;
- Storing of the materials;
- Sorting of stones larger than 200 mm;
- Providing particle size analysis or a compliance certificate for the reserve, if applicable;
- Dewatering of the materials;
- Transport of materials from the storage site to the construction site.

All expenses related to the management of reusable materials, i.e. transportation, storage, loading, etc., will be paid by the General Contractor. Any reusable material will be recovered and given priority of use in order to satisfy construction site needs. In addition, the materials will be stored outside of any riparian strip or street right-of-way.

If the General Contractor runs out of Class B material for backfilling, he will give priority to the crushing Class 1 material and blocks larger than 1 m^3 to the required size and reuse this material before using borrow material from sources outside of the construction site.

The General Contractor will replace all reusable material rendered non-recyclable as a result of his activities and he will not be entitled to any compensation for the replacement of said material.

Reusable surplus and waste materials will be disposed of in accordance with the requirements of the article entitled "Disposal of waste and/or surplus excavation materials" of the Supplementary General Conditions.

29. PURCHASSING OF GRANULAR MATERIAL

29.1 GENERALITY

The General Contractor is informed, that granular materials are stocked at various borrow pits near the village of Eastmain (km 12 and km 26 of the access road to Eastmain).

The Contractor may contact the Cree Nation of Eastmain to validate availability and prices. The Contractor must also effectively manage the use of these materials. These being in limited quantities.

The General Contractor must manufacture the granular materials needed for the project if they are not purchased from the Cree Nation of Eastmain or are in insufficient quantities.

29.2 QUALITY CONTROL OF BORROWING MATERIALS

The General Contractor is responsible for maintaining the quality of the materials in the borrow pits. He must assume all the additional costs of materials quality control during works if the quality of materials imported to the construction site is different of the material available in the borrow pits.

29.3 AGGREGATE FOR ASPHALT

The General Contractor must produce the aggregates for the asphalt mixes. He may contract the Cree Nation of Eastmain to obtain more informations and prices.

30. DISPOSAL OF WASTE AND/OR SURPLUS EXCAVATION MATERIALS

The General Contractor will dispose of all waste and/or excavation surpluses at his own expense, in accordance with the article entitled "Disposal of objects, substances, products and others" of the General Conditions (NQ 1809-900/2002) and with the modifications to these specifications.

The General Contractor will dispose of excavation surpluses in accordance with the following order of priority:

1. Behind planned sidewalks and/or curbs;
2. For all general backfilling required to satisfy the needs at the construction site;
3. As needed by the Cree Nation Government or the Cree Nation of Eastmain, as described below;
4. On private properties within Community limits;
5. At waste disposal sites (located at kilometer 10 on the access road to Eastmain).

The General Contractor will first submit the waste and/or excavation surplus disposal sites to the Engineer and disposal site owners, for approval. Before disposing of the excavation surpluses on private and/or unoccupied properties, the General Contractor will remove the topsoil, which will be placed back on top of the backfilling, when applicable. In addition, the excavation surpluses will be selected based on their content in compactable materials and will be free of topsoil, tree stumps, branches, and blocks or other objects larger than 300 mm in diameter.

The waste and/or excavation surpluses disposal sites will be graded before the end of the work.

The expenses related to the removal and disposal of waste and/or excavation surpluses will be included in the submitted price schedule.

Dry materials will be managed in accordance with section 01560 of the Supplementary Technical Conditions and with the NQ's 2560-600 standard (if applicable), and will be disposed of at sites in accordance with the Environment Quality Act.

The General Contractor is solely responsible for consequences (damages, claims, etc.) related to the disposal of waste and for subsequent claims.

31. COLLECTION OF WASTE AND RECYCLABLE MATERIALS

The General Contractor will facilitate the collection of waste and recyclable materials. To that effect, he will transport waste and recycling bins placed on street curbs by residents to a location where they will be collected by truck. The bins will then be returned to their owners.

32. POTENTIAL CONTAMINATED MATERIAL AREAS

In the presence of contaminated or suspicious materials, over-excavation may be required as instructed by the Engineer, in order to allow the decontamination of the soil within the rights-of-way. Over-excavation, if applicable, will be local and at a depth indicated by the Engineer at the construction site.

Contaminated materials will be removed and disposed of in accordance with section 01560 of the Supplementary Technical Conditions.

33. PROTECTION OF EXISTING STRUCTURES

In addition to the specifications described in item "Existing Structures" of the General Conditions, the General Contractor will take into account that excavation of various nature will be carried out in the vicinity of existing buildings, existing elements (fire hydrant, manholes, etc.) and existing pipes to preserve. The General Contractor will pay special attention to these infrastructures so that they are not damaged.

The General Contractor will hire his own experts to determine the appropriate construction methods to reach the bottom of the excavations.

The General Contractor is solely responsible for damages to the infrastructures (buildings, existing pipes, etc.) and will restore said infrastructures in accordance with the requirements of the Engineer and current standards. All costs related to the hiring of experts, if applicable, and the restoration of any damaged element are at the expense of the General Contractor.

34. IMPLEMENTATION WORKS

Operating, reference or base lines required for the execution of the work will be implemented by the General Contractor in accordance with the information provided on the plans and with the reference markings provided by the Engineer.

The General Contractor will retain the services of the person in charge of the implementation of the works and ensure that they are available at all times in order to provide information to the Engineer's representative at the construction site upon request (to place markers or confirm the position of the structures). The expenses related to these services will be included in the unit prices and lump sums in the bid price schedule.

35. TEMPORARY AND PERMANENT SERVICES

At the beginning of construction and at his own expense, the General Contractor will satisfy all of the needs at the construction site (power, water supply, heating, communications and other services, if applicable).

The General Contractor is responsible for the installation, maintenance and costs for all temporary services until the completion of the work, as well as for the cost of permanent services for the equipment installed during the execution of the contract, up to the provisional acceptance of the works (cost of equipment operation, chemicals, etc.).

The General Contractor is responsible for the diligent processing of connection requests (temporary and permanent services) to public utilities.

36. REPAIRS OUTSIDE OF THE RIGHTS-OF-WAYS AND CONSTRUCTION EASEMENTS

No matter the method used by the General Contractor for the execution of the work, repairs to streets and/or properties outside of the rights-of-way damaged or affected by the General Contractor to ensure access, transport materials, move equipment, trench, etc., are not payable, even if an item is included in the price schedule. These costs must be included in the price schedule as unit prices or lump sums.

37. VIDEO SURVEY

Prior to the beginning of construction, the General Contractor is **obligated** to film the areas where work is to be executed on electronic on electronic media (CD, DVD, etc.) with the Engineer's representative in attendance, in order to clearly capture on film (including relevant commentary) the details of existing conditions (condition of the existing roadway, the planned layout (right-of-way) the buildings, foundation walls, porches, fences, walls, entrances, trees, sidewalks, private entrances, etc.). He is also obligated to restore the area to its original condition upon completion of the work. All roads, accesses and trains targeted for the transport of granular materials, detours or other uses will also be filmed. This task will take place in favorable weather conditions.

The General Contractor will provide three copies of the video recording within three (3) days after filming. One (1) copy will be sent to Cree Nation Government and two (2) copes will be sent to the Engineer.

The expenses related to the production of the video and copes will be included in the submitted bid price.

38. GEODETIC MARKS AND SURVEY MONUMENTS

The General Contractor will protect the geodetic marks and survey monuments located near the construction site

The General Contractor will notify competent authorities if a geodetic mark must be move. He will pay for the expenses related to the move.

The General Contractor will also include in his bid price the cost related to the re-installation by a land surveyor of markers moved due to construction, as described in Article 34 of the Land Surveyor's Act.

39. PUBLIC UTILITIES

39.1 GENERAL

The General Contractor will take the necessary precautions to avoid damages to existing public utilities (Hydro-Québec, Bell, Vidéotron or others). If applicable, the installation or modification of public utilies will not take place without a written authorisation from the organizations in question. The General Contractor will include in his bid price all direct and indirect expenses related to the presence of such facilities (including recently installed poles).

39.2 EXISTING POLES MARKED FOR PROTECTION

Excavation in the vicinity of existing poles, with or without support systems, will be performed carefully in order to ensure the stability of said poles. Any excavation in the vicinity of existing poles will be backfilled immediately. When the stability of the poles will be compromised, whether they are newly installed or marked to be moved, the General Contractor will provide temporary support for the poles in accordance with the public utilities. The General Contractor will first plan and submit his actions to the organisations in question, for approval.

39.3 BURIED UTILITIES

The location of buried utilities indicated on the plans is approximate and the General Contractor will have the organizations in question first locate them accurately prior to construction.

40. PERMANENT ROAD SIGNS

Prior to construction, the General Contractor will request the authorisation of the Owner to remove, dismantle and pack the existing permanent road signs conflicting with the execution of the work, with the exception of traffic direction signs and road identification signs. The signs will be removed and stored with care in a safe location.

During the dismantling/removal of the signs, the General Contractor will report any existing deficiency to a representative of the Owner and to the Engineer. In order not to be penalized for mishandling the signs, the General Contractor will take appropriate actions to document the conditions of the material (site visits, videos, photographs, etc.). If the General Contractor damages the signs, he will pay for replacements. The cost related to all of the tasks described above will be included in the price of the work.

As soon as the existing signs are removed, the General Contractor will install new temporary signs in order to ensure the safety of the road users.

The General Contractor will identify the location of the signs he has removed temporarily on a specific plan so that they can be re-installed at the same location. This plan will be sent to the Owner and the Engineer before the signs are removed.

The General Contractor will re-install municipal signs as before prior to construction and upon completion of the work or as instructed by the Owner.

41. EQUIPMENT, MACHINERY, MATERIALS STORAGE AND GUARD SERVICE

The General Contractor will provide adequate guard services for the entire duration of the project. He will aiso take all actions required to avoid the needless storage of equipment, machinery and materials in the road's right-of-way where construction is planned.

Outside of business hours (evenings/nights and statutory holidays), the General Contractor will park machinery and tools and store materials to accommodate road users safely (minimum clearance: 5 meters). The main storage site will be located away from populated areas.

The General Contractor take all necessary actions to keep the arec clean.

42. CAD FILES

Upon request, the Consultant may provide the General Contractor with CAD (AutoCAD) files of the plan for construction part of the contract's bid documents. However, the General Contractor will first commit in writing to comply with the following conditions (refer to Appendix 2) :

.1 The CAD files are provided only for information purposes at the express request of the General Contractor for the execution of the work. The files are sent only once the General Contractor has confirmed in writing that he accepts these conditions.

.2 Upon reception of the documents, the General Contractor will verify their compliance in every aspect with his copy of the plan for construction. In addition, the markings, sizes or elevations indicated on the plans or on implementation lists take precedence over data from electronic files, in order to take drawing conventions (symbols, etc.) into consideration, among others.

.3 The use of these documents do not relieve the General Contractor or his sub-contractors from their contractual obligations in any way, especially those related to the obligation to verify the sizes indicated on the plan for construction on site.

.4 The General Contractor or his sub-contractors will commit to use the files solely for the purpose of executing the work under the contract.

.5 Any error or omission from the handling, modification or interpretation by the General Contractor of the data in the provided CAD files is the sole responsibility of the General Contractor or his sub-contractors.

.6 Claims from the General Contractor based on the information in the CAD files will not be accepted.

43. ROADWAY IMPLEMENTATION LISTS

A roadway implementation list will not be provided.

44. AS-BUILT PLANS

The General Contractor will locate (x, y, z SCOPQ NAD 83 coordinates) all of the structures built in accordance with the provisions of section 01340 of the Supplementary Technical Conditions.

The file (drawing in .dwg format containing all of the coordinates) will be sent to the Engineer for the production of the "As-built" plans.

This file will be sent to the Consultant two (2) weeks before the provisional acceptance of the project. During this period of time, the Engineer will verify whether or not elements are missing.

45. SUPPLEMENTARY GENERAL CONDITIONS

45.1 HOUSING AND MEALS OF WORKERS

The General Contractor is entirely responsible for housing all the workers assigned to his site. Provide for the submission of field occupancy fees for any mobilized camp in Eastmain. Rooms are also available at the hotel. Housing costs must be negotiated by the Contractor and the Community.

All workers assigned to the site by the General Contractor and including his sub-workers can be fed at the village restaurants. Coverage costs must be negotiated by the Contractor and the Community and provided for in the bid amounts.

45.2 AVAILABILITY OF CONCRETE AT EASTMAIN

A concrete plant is already installed in the village of Eastmain. The price of the concrete must be negotiated by the Contractor and included in the amounts of his bid. This price is subject to change. The Contractor must validate this price during the preparation of his bid.

46. SPECIAL REPORTING REQUIREMENTS FOR CONTRACTS OVER 2 000 000 $

For construction contracts over 2 000 000 $ where a commitment to use Cree manpower has been made, special reporting requirement is mandatory as described below.

Provide a monthly and cumulative breakdown of all the Cree manpower used by the contractor and its subcontractors supported by breakdown described in article entitled "Progress payment" of the General Conditions in order to report on the commitment. The report must minimally include the names, the trades, the number of hours worked, the hourly rates and the total cost for each worker. Only hours worked by Crees are eligible to support the Cree manpower commitment.

In order to determine the rate of each worker in the above reporting, the *Commission de la construction du Québec (CCQ)* benefits plus 15% should be used. For non-construction workers, the rate to use should be agreed with the Engineer.

A holdback of 120% of the amount of the Cree manpower use commitment will be applied to all invoices with insufficient data to support the Cree manpower use for the invoice reference period. Any holdback will be released once supporting Cree manpower use reports are provided.

47. CREE CONTRIBUTION

47.1 CREE CREDIT

The price of the bid submitted by a Bidder shall, for bid evaluation purposes only, be credited by an amount equal to the total amount of the salaries of Cree Beneficiaries that the Bidder undertakes to employ for the execution of the work pursuant to its bid (the "**Cree Workers Covenant**"), up to a maximum credit equal to 10% of the total price of such bid (the "**Cree Credit**").

For the purpose of this Call for Tenders, "Cree Beneficiary" means a Cree beneficiary under the meaning of the James Bay and Northern Quebec Agreement whose name appears on the beneficiary list maintained by Quebec.

47.2 REPORTING

The selected Bidder (the "**Supplier**") shall provide the Cree Nation Government, on a **monthly** basis, with a record of all the Cree Beneficiaries assigned to the execution of the work under the Contract Documents. To this end, the Supplier shall provide the Cree Nation Government with a table indicating for that month the names of all Cree Beneficiaries working for the Supplier or one of its subcontractors further to the Cree Workers Covenant, as well as, for each such Cree Beneficiary, his employer's name, his job title, the number of days and hours worked and the hourly and total salary paid (the "**Cree Contribution**"). The Cree Contribution declared by the Supplier in this table will be binding upon the parties unless the Cree Nation Government issues a written audit request pursuant to section 47.3 within thirty (30) days of the receipt of the table.

47.3 RIGHT TO AUDIT

Upon written request, the Supplier shall make available to the Cree Nation Government all accounting books, records and documents related to the Cree Contribution which the Cree Nation Government may request to verify that the Supplier has complied with its Cree Workers Covenant. The Cree Nation Government may audit and reproduce all documents.

Upon written request, the Supplier shall ensure that all its subcontractors make all accounting books, records and documents related to the Cree Contribution available to the Cree Nation Government, which may audit and reproduce all documents.

47.4 HOLDBACK AND PRICE ADJUSTMENT

In addition to the standard holdback set forth in the General Conditions (NQ 1809-900/2002), the Cree Nation Government shall hold back an amount equal to **one hundred and twenty percent (120%)** of the Cree Credit until the Cree Workers Covenant has been completed to the Cree Nation Government's satisfaction. If, upon the completion of the work, the total amount of the Cree Contribution actually paid is less than the amount of the Cree Credit, the price payable by the Cree Nation Government to the Supplier pursuant to the Contract Documents shall be reduced 120% of the amount by which the Cree Credit exceeds the total Cree Contribution actually paid.

END OF SECTION

APPENDIX 1

DESCRIPTION OF THE PRICE SCHEDULE ITEMS

The prices listed in the bid form represent the totality of the contractor's remuneration and incorporate the cost elements of any kind; SUPPLEMENTARY GENERAL CONDITIONS entitled "Safety and Protection" of the Standard Specification NQ 1809-900-II / 2002 are included in the prices presented. They also included the cost of maintaining traffic and signage for all the duration of the work. The Contractor must establish its price in accordance with the provisions of the "Price and Quantity" in the section ″Instructions to bidders″, of the Standard Specification NQ 1809-900-I / 2002.

The description of the items included in the bid form is detailed in article 12.2 of the standard specifications NQ 1809-300 entitled "Description of the price schedule Items". Without limiting the scope of work to this article, the Contractor must take into account the following particularities in the pricing of his bid.

Section 12.1.4 of Standard Specification NQ 1809-300 is amended to what is included in the bid price by adding the following items:

i) The cost of protecting and/or repairing and / or replacing structures to be retained, such as water and sewer pipes, telephone poles, light poles, energy poles, culverts, ditches, etc. ., no matter where they are located.

j) Leveling, hydraulic seeding and topsoil for all private entrances that will be damaged by work outside of the construction easement allocated to the Contractor.

k) The work described in sections 01340 and 01560 of the supplementary technical conditions.

l) The supply and installation of new sewer (pipes, culverts, service entrances) to replace those that were destroyed during the work, regardless of the material constituting the existing structures.

m) Excavation and backfill to adjust private entrances to the projected profile (including minimum slope of 3H: 1V on each side of the curbs).

n) The repair and/or rebuild of any road damaged by the work, outside the excavation limit stipulated in the contract.

o) The cost of minor work which, although not specified in the contract documents, is customary and necessary for the completion of the various works required by the contract, so that such works are in conformity with the use for which they are intended .

p) The survey of the as-built drawings.

The Contractor must take into account the following particularity in the pricing of his bid.

For the items of the prices schedule entitled **"Work site organization and signage"**, the Contractor must provide a global price including the cost of all labor, all materials, equipments and incidental expenses necessary for the complete execution of works such as, but not limited to, mobilization and demobilization of equipment, transport, accommodation and food for staff, temporary and permanent services, surveying, cleaning, maintenance of premises, security measures, guarding (if required), location of existing services, snow removal, additional easements, video surveys, the costs of the work described in items a) to p) of this article of description of the price schedule items, costs related to the preparation of signage plans, the installation of road signs, the maintenance of access to the shoreline properties, the maintenance of the roadway, as well as the the recovery, storage and re-installation of permanent signage, including all the work and equipment necessary to comply with the standards and regulations, as described in section 02847 of the supplementary technical conditions and the special administrative clauses. This article includes all the work not specifically described in the plans and specifications, but necessary for the complete execution of the construction work, according to the rules of art. The payment of this article will be done in proportion to the general progress of the contract.

For the item of the prices schedule entitled **"Decontamination and gradding"**, the Contractor must provide a price per square meter including the cost of all labor, all materials, equipments and incidental expenses necessary to the complete execution of works such as, but not limited to removal of contamided existing granular material, transportation, material management, disposal of waste materials, gradding as described in section 02225 of the supplementary technical conditions and shown in the plans. The Contractor shall also provide for additional excavations (10m transitions) required for all connections with the existing pavement to ensure that the final level of the asphalt mix can be adequately adjusted to the existing pavement.

For the items of the prices schedule entitled **"Concrete curbs"**, the Contractor must provide a price per linear meter including the cost of all labor, all materials, equipments and incidental expenses necessary to to complete execution of works such as, but not limited to, sawing and removal of the existing curb, disposal of rubbish, excavation and relining, backfill behind it, supply and preparation of the foundations in MG 20 granular material, the formwork, the insulation, the supply and the laying of the concrete as well as the appropriate cure, as described in section 02580 of the supplementary technical conditions and shown on the plans. Also included at the unit price submitted, the presence of poles or obstacles near the edges to be installed, not allowing the passage of the sliding formwork. The molded edge must be replaced by a cast edge in the obstacle area at no extra cost.

For the items of the prices schedule entitled **"MG 20 granular material "**, the Contractor must provide a price per cubic meter of materials including the cost of all labor, materials, equipment and incidental expenses necessary to the complete execution of works, such our, but not limited to, excavation, control of borrowing materials, approval of the material source, the supply of materials, their transport to the site, setting up and compaction of the materials, as described in sections 02225 and 02230 of the supplementary technical conditions and shown in the plans. The price submitted for MG 20 crushed aggregate also includes pre-paving preparation for private entrances, manhole adjustment, catch basin and other accessories.

For the item of the prices schedule entitled **"Asphalt type ESG 14"**, the Contractor must provide a price per metric ton, taking as a basis the supplier's invoices approved by the Engineer, including the cost of any labour, all materials, equipments and incidental expenses necessary to the complete execution of works such as, but not limited to, cutting kerfs, removal of existing pavement, the provision of the information and tests necessary for the approval of the mixture and materials, the supply and the installation of asphalt, as described in section 02510 of the supplementary technical conditions and shown in the plans.

For the item of the prices schedule entilled “**Aggregate production**”, the contractor must provide a global price including the cost of all labor, all materials, equipments and incidental expenses necessary to the complete execution of works such as, but not limited to, excavation, crushing, sifting, stockpiling and testing of the available material in existing borrow pits of the Community, as described in section 02510 of the supplementary technical conditions and supplementary general conditions. The Contractor must consider only producing the necessary aggregates for paving works.

For the item of the prices schedule entitled “**Monetary compensation for non-compliance with the execution schedule and others**”, the Contractor must not enter an amount. However, if he allocated to each of the items of the price schedule, the amounts of monetary compensation consideration that at the end of the contract, the number of days to establish the amount of the monetary compensation will be the difference between the number of days when work was performed and that previously allocated for the work. Any other amount attributable to non-compilance whit the specific general technical conditions will also be retrained in this article.

APPENDIX 2

CONVENTION FOR USE OF CAD FILES

CONVENTION FOR THE USE OF ELECTRONIC FILES OF DRAWINGS

The electronic file of a drawing contains certain information that does not appear on the paper copy or that could be read or interpreted in a different way than with the paper copy, when read and interpreted according to the usual graphic conventions. Some items on the electronic file may not be scaled.

We also warn you formally that only the information that can be read on the paper copy of these signed and sealed drawings, according to the usual graphic conventions, must be considered official. Any use you could make of the electronic files is at your own risk and your entire responsibility. The following conditions apply.

The transmitted electronic files are not signed and sealed within the meaning of the Engineer's Law and may not be used for the purposes of work referred to in section 2 of the Engineer's Law. The transmitted electronic files are strictly for information purposes (or coordination). No guarantee is given on the integrity of the information transmitted. No guarantee is given on the modifications that could have been made to these electronic files. Electronic files should not be used to implement the foundations of the road and the structures to build.

Upon receipt of the documents, the Contractor must ensure compliance of these documents in all respects with the construction plan. The use of these documents does not release the Contractor or its subcontractors from its contractual responsibilities, particularly those relating to the on-site verification of the dimensions indicated on the construction plan. The Contractor or its subcontractors agree not to use the files transmitted for purposes other than those provided for the performance of the work covered by the contract. Any error or omission resulting from the manipulation, modification or interpretation of the Contractor's electronic data portion provided is the responsability of the Contractor or its subcontractors.

Considering the warnings listed above:

We, _____release Tetra Tech QI inc. any liability that may arise from the use of the electronic drawings files used in the bids for the development of our own detailed installation drawings.

We also recognize that electronic design files are loaned to us free of charge for our use only, and we undertake not to release them.

We agree that we undertake to verify the accuracy of the information, and that we will not hold Tetra Tech QI inc. responsible if the electronic files contains certain inacuracies or errors.

_____
Signature of the authorized representative

_____ _____
Name in molded letter – title Date

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

TETRA TECH QI INC.
4655 Wilfrid-Hamel Boulevard
Quebec City (Quebec) G1P 2J7

Tel.: 418 871-8151
Fax: 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE: 34469TT

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

Shop Drawings
Section 01340

TETRA TECH QI INC.
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JUNE 2018
TETRA TECH QI INC. REFERENCE: 34469TT

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1. SCOPE OF WORK

.1 This section completes and modifies the requirements of item 4.4 "Dessins d'exécution et d'assemblage" (execution and assembly drawings) of the NQ 1809-900-II/2002 standard, as well as item 8 of the General Conditions.

.2 The term "shop drawing" is equivalent to "execution and assembly drawings".

.3 Submit the shop drawings, product descriptions and prescribed samples to the Engineer for comments. Prepare and provide the Engineer with one (1) hard copy or electronic copy (*.pdf , *.dwg, *.doc, *.xls formats, etc.) of all shop drawings and/or technical data sheets so that he can approve them. Scanned documents (in pdf format) will be of good quality. Otherwise, hard copies will be submitted. The hard copies will be approved, scanned (in pdf format) and returned to the General Contractor electronically, via Internet. The same will apply to documents submitted electronically. The General Contractor will be responsible for the printing of approved documents for the purpose of preparing manuals, etc. The procedures to send electronic files and retrieve approved documents will be defined during the kick-off meeting.

.4 Beginning work without having received shop drawings, samples and product descriptions commented by the Engineer is not permitted.

.5 Upon reception of the contract award notice, the General Contractor and his sub-contractor will immediately produce shop drawings, technical data sheet and relevant certificates of compliance to standards.

.6 Submit new shop drawings prior to any modification to drawings already stamped.

.7 The General Contractor will provide the Owner with electronic files of the final shop drawings and technical data sheets.

2. REQUIRED SUBMITTALS

2.1 SHOP DRAWINGS

.1 Shop drawings include technical data sheets and documents confirming compliance with standards.

.2 Submit complete shop drawings of equipment to supply and install. Use the transmission sheet in appendix of this section of the specifications to send drawings to the Engineer.

.3 The shop drawings will show equipment layout and sizes, as well as all of the technical details permitting to assess the quality and performance of the submitted equipment. Only equipment required for the contract will be indicated. Prioritize identification on the shop drawings using arrows. When text is highlighted, make colour scans of the drawings.

.4 Shop drawings will show installation details for piping, fittings and supports. They will show all anchors, flanges, sleeves and pipes, as well as the position and characteristics of bases, supports and anchor bolts.

.5 In some cases, schematic diagrams normally provided by the manufacturer, features indicated in catalogues, diagrams, tables, charts, illustrations and descriptive data may replace shop drawings. These documents will not include information that is not relevant to the project and basic information will be completed with additional information relevant to the project.

.6 Shop drawings will indicate the locations of openings in concrete and the pieces of equipment to be incorporated in concrete.

.7 Shop drawings will specify the methods that the General Contractor intends to use to block the openings in concrete required for the installation of pipes.

.8 Concrete manhole shop drawings: The General Contractor will submit for approval only the shop drawings relating to special manholes and prefabricated chambers. For all other standard manholes, provide the certificate of compliance to the corresponding NQ standard.

2.2 SAMPLES

.1 Submit samples of prescribed sizes and in the quantity required.

2.3 RESPONSIBILITIES OF THE GENERAL CONTRACTOR

.1 Verify the shop drawings, the characteristics and the samples prior to submittal to the Engineer.

.2 Verify the following:

- On site, all sizes or existing structural conditions;
- Execution criteria;
- Catalogue numbers and other related information.

.3 Arrange the submitted documents with the requirements related to the structure and contractual documents. The shop drawings will not be approved individually. Verification will only take place when all related drawings will have been submitted.

.4 The shop drawings will be submitted in complete batches, as indicated in the following table:

- Civil engineering: 1 batch for the entire project;

.5 **Verification fees will apply** if the General Contractor wishes to submit the shop drawings in more batches than the number authorised in the table above and/or if the General Contractor requests the verification of several equivalent products for one given piece of equipment (refer to the general conditions, section entitled "**Substitution de matériaux" (material substitution)**.

.6 When submitting documents, inform the Engineer of difference in the submitted documents.

.7 Copies will only be distributed after the reception of shop drawings commented by the Engineer.

2.4 REVIEW OF SHOP DRAWINGS

.1 The procedure for the submittal and review of shop drawings allows the Engineer to review the shop drawings and detect, if applicable, non-compliances or major deviations. In no way does it constitute a comprehensive verification of the data and information therein.

.2 The shop drawings control procedure only aims to allow the Engineer to make a cursory assessment of the general compliance of the structure versus contractual documents. Comments and/or corrections on the drawings will not relieve the General Contractor of his obligation to comply with all contractual requirements, nor do they constitute cautions or approvals in any way should an exception to the requirements be present..

.3 The General Contractor is not relieved from his responsibility regarding any error, omission or diversion from submitted documents, even if the Engineer reviewed and returned said documents without comments.

2.5 DOCUMENTS SIGNED AND STAMPED BY AN ENGINEER DULY REGISTERED WITH THE "ORDRE DES INGÉNIEURS DU QUÉBEC" OR OIQ

.1 The shop drawings of the structures within the Engineer's practice as per the Engineers Act (Article 2) will be signed and stamped by an engineer duly registered with the "Ordre des ingénieurs du Québec" or OIQ.

.2 Specifically, shop drawings representing structures that require engineering calculations will be signed and stamped by an engineer duly registered with the "Ordre des ingénieurs du Québec" or OIQ. Structures such as prefabricated structures custom-made based on performance specifications or on plans that do not include all engineering details (such as roof trusses) will be submitted on signed and stamped drawings.

.3 Drawings of manufactured products or objects produced serially, which are not necessarily designed specifically for a given project, do not require an engineer's signature and stamp.

.4 Assembly drawings to clarify project components which are required, but do not require engineering calculations, do not need an engineer's signature and stamp.

2.6 DRAWINGS OF TEMPORARY STRUCTURES

.1 Prior to construction and for information purposes, the General Contractor will provide the Engineer with drawings of temporary structures that will include the method to build or repair a permanent structure.

.2 Among others, these drawings are, shoring, erection and lifting systems, put in function of temporary support, blasting plans, the demolition of existing structures, demolition material recovery devices, waste storage areas, loading areas, stone crushing areas, access roads and tow paths, borrow pit operations, etc.

.3 If the work indicated in temporary structures drawings are likely to affect a third party, the General Contractor will obtain the said party's authorisation prior to construction and will provide additional copies of the drawings.

.4 The Engineer does not supply drawings of temporary structures. If he exceptionally provides them and if they are part of the plans and specifications and of the contractual documents, they have the same value and will be processed in the same way as construction plans.

.5 Shop drawings representing temporary structures that required engineering calculations will be signed and stamped by an engineer duly registered with the "Ordre des ingénieurs du Québec" or OIQ.

2.7 SUBMITTAL REQUIREMENTS

.1 The shop drawing transmission sheet provided in appendix of this section of the specifications will be attached to the shop, execution and assembly drawings, as well as to technical data sheets and/or certificates of compliance submitted to the Engineer. The transmission data sheet will include the following information:

- The name of the General Contractor and of the person in charge;
- The name of the sub-contractor and of the person in charge;
- The name of the supplier and of the person in charge;

- References to the plans;
- References to the specifications;
- The transmission date;
- The number of the drawing and/or revision.

.2 In addition, different transmission sheets will be used for each trade and/or supplier.

.3 All parts, pipes, valves and fittings indicated on the drawings, data sheets or documents will be identified and numbered in accordance with the same codes used on the plans. The numbering will be agreed upon with the Engineer.

.4 Incorrectly identified drawings sent to the Engineer will be returned to the General Contractor without having been reviewed, with the mention "Soumettre à nouveau (refusé)" (rejected, submit again.

3. LIST OF SHOP DRAWINGS AND FOLLOW-UP

.1 The General Contractor will provide the Engineer with an electronic comprehensive list of the shop drawings that he intends to submit. The list will include the following information:

- The name of the project;
- The Tetra Tech reference number;
- The description of the submitted drawing;
- The submittal date;
- The type of submitted document ("FT" = fiche technique" (technical data sheet), "DA = dessin d'atelier" (shop drawing), "DN = dessin de conformité aux normes" (compliance with standard).

.2 The list will include four (4) additional empty columns for use by the Engineer.

.3 After the awarding of the contract, the General Contractor may request a template of this list.

.4 The Engineer will return the approved list to the General Contractor after verification and the addition of the drawing numbers.

.5 The General Contractor will use the reference numbers indicated on this list to submit his shop drawings.

.6 The General Contractor will keep the list up-to-date and will provide the Engineer with an updated list on a regular basis.

4. "AS-BUILT" DRAWINGS

.1 Upon completion of the work, the General Contractor will provide the Engineer with plans that will show the work as it has been executed, commonly called "as-built" drawings. Provide one (1) copy of all plans in AutoCAD format, version 2008 or latest version (this is the only acceptable format). The plans will be to scale and show all of the work as executed at the construction site.

.2 Specifically, the General Contractor will indicate all of the structures he has built (aboveground and underground structures and accessories). Comprehensive documents are mandatory. The following items (among others) will be included :

- Manholes and catch basins (center cover/grid);
- Other concrete chambers;
- Valves;
- Sidewalks, curbs and traffic islands (3-point radius measurements), driveways (beginning-end);
- Street profiles every 20 metres (3-point) and slope changes, low points, high points.

Each trade will produce "as-built" plans (in PDF format), which will include all of the items built or implemented in the context of the project, as well as all construction changes.

.3 The General Contractor will provide the Consultant with these plans, as per the provisions of the supplementary general conditions.

END OF SECTION

APPENDIX 1

SHOP DRAWINGS TRANSMISSION SHEET

SHOP DRAWING TRANSMISSION SHEET

Client: Cree Nation Government **Transmission Date:**

Project Title: Paving of Internal Roads – Meskino "A" et "B" Eastmain **TETRA TECH Reference:** 34469TT

IMPORTANT: The section of the specifications will be indicated for all submitted shop drawings and each copy will include the identification number indicated on the List of Shop Drawings. Shop drawings will not be approved if this transmission sheet is not attached and if drawing numbers do not appear on each drawing.

	GENERAL CONTRACTOR	SUB-CONTRACTOR	SUPPLIER
Nom:			
Person in charge:			
Telephone:			
Fax:			

Drawing Identification Number	Description	Number of Copies	Reference to plans/specifications	Trade	Sent to:	Code*

Do not write in boxes containing and asterisk (*)

Trades: M = Mechanical Engineering A = Architecture V = Ventilation I = Instrumentation & Control S = Structural Engineering E = Électricity P = Plumbing C = Civil Engineering

Codes A = Accepted S = Stamped C = Commented and stamped R = Re-submit (rejected)

TETRA TECH

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

Environment Procedures
Section 01560

TETRA TECH QI INC.
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JUNE 2018
TETRA TECH QI INC. REFERENCE: 34469TT

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1. GENERAL

Generally speaking, during the execution of the work, the General Contractor will comply with the requirements of the contract in terms of environment protection, including the provisions of the *Environment Quality Act (L.R.Q., c. Q-2)* as described in the latest edition of the "Cahier des charges et devis généraux" or CCDG (General Conditions and Specifications), Section 6 "Obligations et responsabilités de l'Entrepreneur" (obligations and responsibilities of the general contractor), Articles 6.9 and 6.14 and under the *Act respecting the conservation and development of wildlife* (L.R.Q., c. C-61.1), the *Forest Act (L.R.Q., c. F-4.1)* and related regulations.

In addition, the General Contractor will comply with the requirements relating to the protection of the environment set out in Article 5.4 of the BNQ 1809-300 standard.

The General Contractor will also take the following items into consideration:

.1 Oil and fuel spill kit: CCDG, section 10.4 "Protection de l'environnement" (environment protection), Article 10.4.2 – *Environment Quality Act*, Article 21

At all times, the General Contractor will keep an emergency oil and fuel spill kit, which will include containment booms, absorbent rolls, peat moss and containers and related accessories (gloves, etc.) essential to address small accidental spills and ensure the recovery of hydrocarbons, the storage of soiled material and the management of contaminated soils and materials. The kit will include a sufficient number of absorbent rolls to intervene on the entire width of the body of water or to confine the petroleum products inside the perimeter of the machinery in question. It will be easily accessible at all times to ensure quick action.

The General Contractor will not discard, pour or release any organic or inorganic matter from petroleum products or by-products (antifreeze or solvents) in watercourses on in the soil. Such products will be recovered at the source and disposed of in accordance with the legislation, policies and regulations of the "Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques" or MDDELCC (ministery of Sustainable Development, Enviromental and Fight again climate change) and as approved by the Client.

According to the Environment Quality Act, Article 21, "Whoever is responsible for the accidental presence in the environment of a contaminant contemplated in section 20 must advise the Minister without delay."

.2 Protection against erosion: CCDG, Section 10.4 "Protection de l'environnement", Article 10.4.3.5

Wherever there is a risk of erosion at the construction site, the soil will be stabilized. In order to prevent erosion at the construction sites, the General Contractor will make sure that deforested areas left cleared and exposed to atmospheric agents are limited to the strict minimum in terms of surface and duration. Deforestation will be restricted to the area of the road under construction. Prior to construction, the General Contractor will inform the MDDELCC of the exposure period and the section of road to deforest or clear. For the entire construction period, runoff from the outside of the construction site will be intercepted and conveyed outside of the construction site. Slopes will be stabilized in accordance with the plans and specifications. The General Contractor will produce a sketch and a description of the temporary and permanent structures that he intends to implement to prevent erosion and submit them to the Engineer. If construction is suspended for the winter, preventive soil stabilization measures will be implemented in accordance with the plans and specifications.

.3 Dust control: CCDG, Section 12 "Fondations de chaussée" (road sub-grades/sub-bases), Article 12.4 – Dust Control

When vehicles travel on a sub-base consisting of aggregates and when atmospheric conditions cause an excessive amount of dust that affects traffic and the environment (amount of suspended dust higher than 40 mg/m³ after the passage of a vehicle), the road surface must be treated with a dust control liquid certified by the "Bureau de normalisation du Québec" and meeting the ecotoxicological requirements of standard NQ 2410-300 "Produits utilisés comme abat-poussières pour routes non asphaltées et autres surfaces similaires" (products used for dust control on unpaved roads and other similar surfaces). These requirements must be met at all times.

Dust control will also be implemented near truck scales and detours, as well as on private roads used for the transportation of borrow materials.

Dust control liquid on foundation materials will consists solely of water until results from particle size analysis are received and confirm that the materials are compliant. Should the General Contractor apply a type of dust control liquid other than water prior to the reception of particle size analyses results for the foundation materials, he will waive his right of recourse, unless sampling has taken place before the application of the dust control liquid, in accordance with the prescribed procedure.

The dust control liquid will be applied on a leveled surface prepared in accordance with the requirements relating to the given aggregates.

.4 Materials: CCDG, Section 10.4 "Protection de l'environnement" (environment protection), article 10.4.1

The aggregates used to build the structures will not come from a body of water, nor will it come from its embankments or any other source located less than 75 m from the aquatic environment (stream, creek, river, lake or sea).

Unless authorized by competent authorities, the materials used for construction will be free of contaminants as per the MDDELCC's "*Politique de protection des sols et de réhabilitation des terrains contaminés"* (Soil Protection and Rehabilitation of Contamined sites Policy).

.5 Waste: CCDG, Section 11 "Terrassements" (earthworks), Article 11.4.7

Waste material consist of surplus material or material that cannot be used in the context of the project. They include the following:

- Natural materials;
- Demolition materials;
- Hazardous materials.

Natural materials include clay, loam, sand, gravel, rock and organic soil.

Demolition waste consist of materials deriving from the demolition of existing structures (asphalt pavement, cement concrete, wood, steel, etc.).

Hazardous materials and contaminated soils consist of chemical waste, hydrocarbons, and paints, as indicated in the Regulation respecting hazardous materials.

The management and disposal of waste materials will be in accordance with the Regulation respecting the landfilling and incineration of residual materials, the Regulation respecting hazardous materials, the MDDELCC's "*Politique de protection des rives, du littoral et des plaines inondables"* (policy on the protection of riverbanks, shorelines and flood plains), if applicable, and the Enviornment Qualilty Act *(L.R.Q., c. Q-2)*.

Exceeding concrete and the water used for the cleaning of cement trucks will be disposed of in areas identified for that purpose in order to avoid contaminating the environment. The location will have been authorized previously by the Community.

In all cases, the General Contractor will provide the Engineer with a written confirmation that the materials from the construction site have been disposed of at an authorized site. The Engineer will make sure that the General Contractor is transporting the materials to an authorized site.

In addition, should waste material be discovered at the construction site, work will be stopped immediately and the Engineer will be notified immediately so that he can instruct the General Contractor on the procedure to follow regarding the management of said waste in accordance with the requirements mentioned above.

.6 Contaminated soils:

Should contaminated soils be discovered at the construction site, work will be stopped immediately and the Engineer will be notified immediately. He will instruct the General Contractor on the procedure to follow sites Policy in accordance with the "*Politique de protection des sols et de réhabilitation des terrains contaminés"* (policy on soil protection and the rehabilitation of contaminated land) (R.R.Q., c. Q-2, r.37), and related regulations, mainly the "*Règlement sur la protection et la réhabilitation des terrains"* (Land Protection and Rehabilitation Regulation).

The management of excavated contaminated soil will be in accordance with the *Regulation respecting the burial of contaminated soils*, the *Regulation respecting contaminated soil storage and contaminated soil transfer stations* and the Contamined site management system of the Quebec government authority's "*Politique de protection des sols et de réhabilitation des terrains contaminés*" (Soil Protection and Rehabilitation of Contaminated sites policy). In addition, the General Contractor will provide the Engineer with written proof that the contaminated soils from the construction site have been disposed of at authorised sites, in accordance with applicable legislation and regulations.

.7 Plans relating to temporary structures: CCDG, Section 6 "Obligations et responsabilités de l'Entrepreneur" (obligations and responsibilities of the general contractor), article 6.6.3

Plans relating to temporary structures describe the methods recommended to build or repair a permanent structure. These plans pertain to (without being limited to) the following: sedimentation basins, filtering berms and sediment traps, sediment barriers, temporary watercourse diversions, dykes, waste storage areas, loading areas, stone crushing areas, access roads, etc.

The plans relating to temporary structures are sent to the MDDELCC for information purposes. If the work included in the plans may cause prejudice to a third party, the General Contractor will obtain authorisations beforehand and provide additional copies.

.8 Accidental spillage of petroleum products, sediments, contaminated soils, etc.

The General Contractor will inform "Urgence Environnement" of any accidental spill likely to affect the environment. The telephone number of "Urgence Environnement" will be posted in the construction site trailer:

URGENCE ENVIRONNEMENT

Telephone: **1-866-694-5454** (collect call)

24 hours

and

ENVIRONNEMENT CANADA

Telephone: **1-866-283-2333** or 514-283-2333

As stipulated in Article 10.4.2 of the CCDG, the General Contractor will have an emergency oil and fuel spill kit on site for the entire duration of construction. The Supervisor will be shown this kit at the beginning of construction.

The Supervisor will be informed immediately of any spill at the construction site and in a watercourse. The contaminated materials will be quantified and recovered. The Supervisor will be provided with a confirmation of transportation to an authorised site.

Expenses related to the petroleum products recovery kit will be broken down in the various items of the price schedule.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

Earthworks and Roadworks
Section 02225

TETRA TECH QI INC.
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Fax: 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE: 34469TT

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1. GENERAL

1.1 SCOPE OF WORK

.1 This section covers all of the work required to shape the road as per indicated in the plans and in accordance with the longitudinal and transverse profiles, up to the elevation of the infrastructure's line.

.2 Earthworks and roadworks include the following (without being limitations):

- Deforestation, grubbing, felling and the protection of trees and shrubs;
- The treatment of weak soils;
- Excavated materials;
- Transitions;
- Lateral, transverse ditches and off-take drains;
- Backfilling;
- Borrow materials;
- Compaction;
- Infrastructure preparation and stabilisation;
- Cleaning and final levelling;
- Private entrances and driveways;
- Supply of materials;
- Disposal of waste.

.3 Useful information:

- Pavement Structure, Section 02230.
- Sidewalks and Curbs, Section 02580.
- **Passages in italics or brackets refer to the NQ 1809-300 standard.**

1.2 REFERENCE STANDARDS

.1 "Cahier des charges et devis généraux, Infrastructures routières - Construction et reparation" or CCDG (general conditions, road infrastructures – Construction and repairs), edition specified in the general technical conditions.

- Part 2: Section 11 "Terrassements" (earthworks).

.2 Standard NQ 2560-600 "Granulats - Matériaux recyclés fabriqués à partir de résidus de béton, d'enrobés bitumineux et de briques - Classification et caractéristiques" (aggregates – recycled materials fabricated using concrete, asphalt and brick residues).

.3 In case of conflict between this section and the CCDG, the requirements of this section prevail over any conflicting provisions.

.4 This section is the special specifications to which referred the CCDG.

.5 Notwithstanding the provisions of the CCDG, measuring and payment will be in accordance with the general and supplementary general conditions of these specifications.

1.3 DEFINITION

.1 Borrow materials: Material obtained from locations outside of the construction area or easement. Excavated materials are not considered borrow materials. All costs related to the reuse of material (including pulverised asphalt) are included in excavation activities and/or excavated materials, whether or not they are part of a whole or a distinct item of the price schedule.

1.4 MATERIAL SAMPLES

.1 Two (2) weeks prior to construction, provide a recent particle size analysis of the borrow materials that will be used, as well as the names and addresses of the suppliers. Plan for a minimum of one week to obtain the approval of the Engineer.

2. PRODUCTS

2.1 MATERIALS

.1 Provide all of the raw materials required to execute the work.

.2 All materials will come from authorised sites as per the Regulation respecting pits and quarries.

.3 At all times, the General Contractor will comply with the Environment Quality Act (L.R.Q., c. Q-2) and with the Regulation respecting pits and quarries.

3. EXECUTION

3.1 EXPLORATORY HOLES

.1 Drill exploratory holes in accordance with the instructions of the Engineer in order to verify the quantity and quality of the excavated material, e.g. existing road structure, and judge whether or not they can be reused, if applicable.

3.2 OPERATION PRIORITIES

.1 Excavate material prior to trenching when the infrastructure consists of sand or any other reusable material. Separate the materials while excavating: topsoil, reusable materials and waste materials.

.2 Trench before excavating when the infrastructure consists of clay or other unstable material. Then, excavate in such a way as not to disturb or stir the soil of the infrastructure using appropriate equipment, e.g. power shovel, and to avoid traffic.

.3 At his own expense, the General Contractor will replace infrastructure material rendered unstable due to construction work with material that will be compacted and approved by the Engineer.

3.3 LAND CLEARING, GRUBBING AND ASSARTING (9.1)

.1 Obtain all permits required for the work, including (without being limited to) the burning of waste or the disposal of waste via other methods.

.2 Clear and grub the site prior to excavation. Protect the trees located outside of the areas marked for deforestation on the plans.

.3 Preserve the trees that do not hinder the work and protect their roots so that they are not moved or damaged.

.4 Cut sick tree branches and cut the trees overhanging the excavation that constitute hazards.

.5 Unless otherwise indicated, cut wood is the property of the General Contractor, who will dispose of it in accordance with current regulations.

3.4 EXCAVATED MATERIAL

.1 Remove the topsoil separately from class 2 excavation to ensure the reuse of underlying material and topsoil, if applicable. Topsoil will be reused in accordance with Article 11.4.5.3.2 of the CCDG.

.2 Remove or pulverize existing pavement using the method selected by the General Contractor. In both cases, remove the waste in accordance with the following requirements and specifications:

- The General Contractor will first reclaim residual pavement and favor recycling via the paving sub-contractor (agreement pending) or other parties;
- Disposing of this waste on private properties or on government or Crown land without a certificate of authorisation from the "Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques" or MDDELCC (the Quebec government authority on the environment) and in violation of the NQ 2560-600/2002 standard from the "Bureau de normalisation du Québec" is strictly prohibited. . The General Contractor will dispose of this waste on sites authorized by the MDDELCC;
- Dispose of the pavement at the landfill site or at the dry material disposal site;
- The disposal of pieces of pavement that have not been pulverized in the trenches is not authorized;
- Pulverized material will not be reused under the line of the infrastructure and as foundation and paving material;
- Existing asphalt may be pulverized or crushed and mixed with other materials to be used as sub-grade or sub-base. The maximum proportion of asphalt in the mix is 40% for the sub-grade and 15% for the sub-base. This mixture will comply with all of the specifications for the material prescribed for the sub-grade or sub-base in terms of particle size. Aggregate (MG 112, MG 56 or MG 20) qualitative tests will be carried out only after the addition of the pulverized asphalt.
- The General Contractor will take the necessary actions to ensure the compliance homogeneity of the mixes. To that effect, he will use methods and equipment appropriate for the condition of the raw and reused materials that he will eventually mix together (sieves, crushers, separate sieves to mix and proportion the aggregates, etc.). The General Contractor's working method will be submitted to the Engineer for approval at least two (2) weeks prior to the preparation and fabrication of the materials.

- The content in residual asphalt will be lower than 2% for the sub-grade and 0.8% for the sub-base. The General Contractor will have the particle sizes and asphalt content analysed by a recognized laboratory and he will submit the results to the Engineer. A particle size and asphalt content analysis is required for every 2,000 tons of mixed product. A production control log indicating the location, date and tonnage when sampling will accompany all of the results. All costs related to reuse will be at the expense of the General Contractor and will be included in item **"**Déblai" (excavated material) of the price schedule**.**

.3 Prior to the execution of the work, the General Contractor will provide the Engineer with the steps he intends to take regarding waste disposal in order to obtain the required authorizations, in accordance with the environmental standards, regulations and legislation (MDDELCC: Regulation respecting the landfilling and incineration of residual materials, Q.2, r.6.02 and item 66 of the Environment Quality Act) and with municipal regulations (Regional County Municipalities, urban planning and related interim regulations) for every applicable area.

.4 Waste material from the demolition of existing structures, such as crushed pieces of asphalt pavement or cement concrete that cannot be recycled within the project's boundaries, will be disposed of in sites authorized by the MDDELCC, in accordance with the Environment Quality Act and more specifically with standard NQ 2560-600 from the "Bureau de normalisation du Québec" and item 5.4 of the NQ 1809-300 standard.

.5 The removal of sidewalks and curbs, cement concrete or asphalt concrete coatings, concrete debris, manholes, catch basins, culverts or other structures, will be included in the excavation or trenching operations. The waste will be separated during excavation to ensure that they will not be incorporated to reusable materials.

.6 Make the transitions indicated on the plans when material changes are required for the infrastructure, when excavation changes to backfilling and near civil engineering structures.

.7 Have the infrastructure approved before building the road structure.

3.5 WASTE DISPOSAL ***(5.4 AND 9.1.10)***

.1 The General Contractor will refer to the prescriptions of section 01560 "Environment Procedures" of the supplementary technical conditions and of the supplementary general conditions regarding the disposal of waste and/or excavation surplus material. In addition, he will choose the waste disposal locations in accordance with the provisions mentioned above.

.2 Regarding dry materials (pavement, concrete, pipes, tree stumps, trees, shrubs,), comply with item 5.4 of the NQ 1809-300 standard and with the BNQ's 2560-600 standard.

.3 Pay special attention to reusable accessories (post-hydrants, pipes (all materials), manhole frames and covers, etc.) marked to be returned to the municipality.

3.6 STOCKPILING

.1 Stockpile the backfilling material and topsoil marked for reuse. The General Contractor will note that during earthworks, topsoil will not be stockpiled or spread on the bank between the right-of-way's boundary and the ditch, in order to facilitate runoff and avoid affecting plant growth.

.2 Stockpile the aggregates in such a way as to avoid segregation and to favor drainage.

.3 Protect the stockpiled material against any contamination.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITONS

Pavement Structure
Section 02230

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1. GENERAL

1.1 SCOPE OF WORK

.1 Road structure consists of a sub-grade, a sub-base and a road base.

.2 This section pertains to the materials used to create the road structure and related work.

.3 Useful information :

- Earthworks and Roadworks, Section 02225;
- Asphat pavement, Section 02510;
- Curbs and Sidewalks, Section 02580;
- **Passages in italics or brackets refer to the NQ 1809-300/2004 (R2007) standard.**

1.2 REFERENCE STANDARDS

.1 "Cahier des charges et devis généraux" (or CCDG), Infrastructures routières - Construction et reparation" (general conditions, road infrastructures – construction and repairs), latest edition:

- Part 2: section 12 "Fondations de chaussée" (roadway foundations).
- Part 3: "liste des normes et méthodes du Ministère", standard 2101 in "Tome VII – Matériaux" (book VII – materials) in "Collection Normes - Ouvrages routiers du ministère des Transports, de la Mobilité durable et de l'Électrification des transports du Québec" or MTMDET (the Quebec government authority on transportation's standard collection – road structures").

.2 Standard NQ 2560-114 "Travaux de génie civil - Granulats" (civil engineering – aggregates).

.3 In case of conflict between this section and the CCDG, the requirements of this section prevail over any conflicting provisions.

.4 This section is the special specifications to which referred the CCDG.

.5 Notwithstanding the provisions of the CCDG, measuring and payment will be in accordance with the general and supplementary general conditions of these specifications.

1.3 MATERIAL PROVIDED BY THE GENERAL CONTRACTOR

.1 Supply all materials necessary for the construction of the road's structure.

.2 All materials will come from authorized sites as per the Regulation respecting pits and quarries. At all times, the General Contractor will comply with the Environment Quality Act (L.R.Q., c. Q-2) and with the Regulation respecting pits and quarries.

.3 The General Contractor will hire and pay for the services of a laboratory holding an ISO 9002 certification and approved by the Engineer (refer to item 1.1 of the CCDG "Définitions « Certificat d'enregistrement conforme à la norme ISO »" (definitions, certificate of compliance with the ISO standard), which will test the source material and provide the certificates of compliance regarding the source or reserved material. The laboratory hired by the General Contractor will take the appropriate sample and conduct the tests required for qualification and certification (certificate of compliance).

.4 The expenses incurred for all of the work described in this section of the specifications are included in the aggregate unit prices for the sub-grade, sub-base and road base.

.5 The Owner reserves the right to sample at any time.

1.4 MATERIAL CERTIFICATES OF CONFORMITY

.1 Two (2) weeks prior to the beginning of construction, provide the certificates of compliance for the sub-grade, sub-base and road base materials (aggregates).

2. PRODUCTS

2.1 SUB-BASE MATERIALS

2.1.1 General

.1 Base materials will comply with Article 12.2.1 of the CCDG. This item completes and/or modifies the CCDG in terms of aggregate requirements and regarding the penalties.

.2 The specific requirement of 80 µm passing in the 5 mm sieve does not apply to aggregates from quarries (crushed stone). The use of stone screenings is not permitted. The addition of sand to aggregates produced at a quarry is not permitted either. The General Contractor will plan to use appropriate stone crushing equipment and he will carry out all sieving, crushing and other tasks to produce aggregates in accordance with the specifications.

.3 The General Contractor may use aggregate of the MG 56 type for the sub-base instead of MG 112 aggregate. In that case, said material will comply with all of the specifications included in item 2.2 "Matériaux de foundation" (foundation materials) of this section of the specifications. In addition, the materials will be subjected to the MG 56 penalty system and the unit price for payment purposes will remain that of the MG 112 aggregate.

2.1.2 Base specifications

.1 Gravel, sand or crushed stone used for the base will be in accordance with standard 2101 of "Tome VII – Matériaux" (book VII – materials) of the MTMDET's standards "Ouvrages routiers" (road structures) and with standard NQ 2560-114 "Travaux de génie civil – Granulats" (civil engineering – aggregates) after compaction, while taking into account the following particle size specifications:

TABLE 2.1.2-1 : PARTICLE SIZE SPECIFICATIONS FOR THE SUB-BASE

	Reserve	After Placement (1)
Sieve	MG 112 % passing	MG 112 % passing
112 mm 5 mm 80 µm	100 12 –100 0 – 8	100 12 – 100 0 – 10

(1) After placement" means after compaction at the construction site.

2.1.3 Qualification of source materials

.1 For acceptance purposes, the materials will comply in every way with the provisions of items 2.1 and 3.3.1 of this section of the specifications and with standard NQ 2560-114, Part II.

.2 The General Contractor is required to clearly identify each reserve of materials used in the contract. The identification method will allow the easy recognition of the nature of the materials and its intended use. The identification will located so that it will be visible by the Engineer's representative and by the operators assigned to the handling of the material.

2.1.4 Certificate of conformity for source or reserve material (including material recovered from the construction site)

Certificate

.1 Provide the Engineer with a certificate of compliance confirming that the inherent features and other characteristics of the material in the source or reserve area meet the requirements of this section of the specifications and that of the CCDG.

.2 In addition, for reserved materials, the certificate will include the results of comprehensive particle size analyses conducted as per the LC 21-040 testing method based on sampling in accordance with the LC-21-010 aggregate testing method, as per the rate indicated in item 2.1.5 of this section of the specifications. In addition, a sketch showing the location of the reserve, the sampling location and descriptions of the processing necessary to obtain homogenous and compliant material, will be attached to the certificate.

.3 The certificate will be sent to the Engineer at least 48 hours prior to the transportation of the material.

.4 If source material (from gravel or sand pits) are layered (alternate layers of sand, silt and/or clay), the General Contractor will eliminate all frost-prone materials, such as clay and silts, and reserve the material in accordance with the prescriptions of Article 12.3.2.2.1 of the CCDG. If layering issues occur during processing in the area, the General Contractor will also remove all frost-prone materials and re-issue a certificate of compliance representative of the exploited area. In each case, the minimum reserve will be 5,000 tons (2,500 m^3) or equal to the tonnage (cubic content) indicated in the contract for lesser quantities.

2.1.5 Minimum testing rate – Particle size analysis and quality testing

.1 Implement a particle size testing program where the minimum testing rate will be one for each 2,500 m^3 of aggregates with a minimum of three (3) tests per exploitation area or reserve.

.2 Conduct qualitative tests at a minimum rate of one (1) test per 10,000 m^3 of aggregates with a minimum of three (3) tests per exploitation area or reserve. When the quantity of aggregate produced per exploitation area or reserve will be smaller than 5,000 m^3, a minimum of two (2) tests is required.

2.1.6 Authorisation for aggregate transportation and placement

.1 The Engineer will authorize the transportation of the materials only upon reception of a certificate confirming the compliance of the material for each item listed on the certificate.

.2 The General Contractor that will submit a certificate in compliance with the specifications of this contract is not released in any way from his responsibility to provide materials in accordance with the contractual requirements after their complete implementation at the construction site. Consequently, he will maintain, at his own expense, appropriate control mechanisms.

.3 When placing the materials, the General Contractor will take into account their potential degradation due to the use of construction equipment and vehicular traffic.

.4 In that respect, the General Contractor is not authorized to transport and install aggregates when the percentage passing of source or reserve samples through a 80 µm sieve is equal to or higher than the totality of the sample.

2.2 BASE MATERIALS

2.2.1 General

.1 Base materials will be in accordance with the provisions of Article 12.3 of the CCDG.

2.2.2 Base specifications (MG 20 and MG 56 aggregates)

.1 Article 12.3.1 of the CCDG, is replaced by the following:

MG 20 aggregate, as well as MG 56 aggregate, used for the base will be in accordance with the requirements of standard 2101 of "Tome VII – Matériaux" (book VII – materials) of the MTMDET's standards on road structures and with standard NQ 2560-114 "Travaux de génie civil – Granulats" (civil engineering – aggregates), "partie II : Fondation, sous-fondation, couche de roulement et accotement" (part II, sub-base, road base and shoulder) after compaction, while taking into account the following particle size specifications:

TABLE 2.2.2-1: PARTICLE SIZE SPÉCIFICATIONS FOR MG 20 (20-0)

Sieve	Reserve Aggregates % passing	Aggregates after complete placement (1) % passing
31.5 mm	100	100
20 mm	90 - 100	90 – 100
14 mm	68 - 93	68 – 93
5 mm	35 - 55	35 – 60
1.25 mm	15 - 38	15 – 38
315 µm	5 - 17	5 – 17
80 µm	2.0 – 5.0	2.0 – 7.0

(1) "After complete implementation" means after compaction at the construction site.

TABLE 2.2.2-2: PARTICLE SIZE SPECIFICATIONS FOR MG 56 (56-0)

Sieve	Reserve Aggregate % passing	Aggregates after complete placement (1) % passant
80 mm	100	100
56 mm	82 - 100	82 – 100
31,5 mm	55 – 80	55 – 85
5 mm	25 – 45	25 – 50
1.25 mm	11 – 30	11 – 30
315 µm	4 – 18	4 – 18
80 µm	2.0 – 5.0	2.0 – 7.0

(1) "After complete implementation" means after compaction at the construction site.

.2 If the particle size specifications for the reserved aggregates (weighted average of the test results) are no compliant, the General Contractor may demonstrate that the specifications after implementation and compaction will be compliant using a reference area (Article 12.3.3.5 of the CCDG). Once the reference area is built, the laboratory hired by the General Contractor, as described in Article 1.1 of the CCDG (definition of "certified laboratory"), will take three (3) random samples and conduct a particle size analysis on each of the three (3) samples. The averaged results of these particle size analyses must be in accordance with the grading range after complete implementation as described in this article.

.3 If the particle size requirements weighted average of the test results) for reserved aggregates are not compliant, the General Contractor may submit in writing, to the Engineer, the details of the process proposed to make the material compliant and homogenous. He will take new samples and conduct new tests in accordance with the provisions of Article 12.3.2.2 of the CCDG. The results will be on the certificate of compliance.

.4 Enhancement using sand to make material deriving from crushed stone compliant with the particle size requirements is strictly prohibited. The General Contractor will plan the use of appropriate stone crushing equipment and he will carry out all of the tasks related to sieving, crushing, etc., required for the production of aggregates compliant with the specifications of the CCDG and of this section of the specifications.

2.2.3 Qualification of source material

.1 Apply Article 12.3.2 of the CCDG for MG 20 and MG 56 aggregates.

2.2.4 Reserve

.1 Apply Article 12.3.3.1 of the CCDG for MG 20 and MG 56 aggregates and the following:

- The General Contractor is required to clearly identify each reserve of materials used in the contract. The identification method will allow the easy recognition of the nature of the materials and its intended use. The identification will located so that it will be visible by the Engineer's representative and by the operators assigned to the handling of the material.

2.2.5 Certificate of conformity for reserve foundation material

.1 Apply Article 12.3.2.2 of the CCDG for MG 20 and MG 56 aggregates.

2.2.6 Authorisation to transport and place aggregates

.1 The Engineer will authorize the transportation of the materials only upon reception of a certificate confirming the compliance of the material for each item listed on the certificate.

.2 The General Contractor that will submit a certificate in compliance with the specifications of this contract is not relieved in any way from his responsibility to provide materials in accordance with the contractual requirements after their complete implementation at the construction site. Consequently, he will maintain, at his own expense, appropriate control mechanisms.

.3 When placing the materials, the General Contractor will take into account their potential degradation due to the use of construction equipment and vehicular traffic.

.4 In that respect, the General Contractor is not authorized to transport and install aggregates when the percentage passing of source or reserve samples through a 80 µm sieve is equal to or higher than 5% of the total sample.

3. EXECUTION

3.1 GENERAL

.1 The manufacturer's certificate of compliance with the specifications of this section does not relieve the General Contractor from providing material in accordance with contractual requirements. Consequently, he will maintain, at his own expense, appropriate control mechanisms.

.2 When placing the materials, the General Contractor will take into account their potential degradation due to the use of construction equipment and vehicular traffic.

.3 Implement in accordance with the specifications of Articles 12.2.3 and 12.3.3 of the CCDG.

.4 Have the sub-grade longitudinal and transverse profiles approved prior to the construction of the road structure. Work will not begin before this approval is received.

.5 Correct the sub-grade surface depressions and ruts. Give the sub-grade the slope indicated on the plans. Correct any deviation in excess of 20 mm from the level required.

.6 When the sub-base is not demanded or required by the Engineer, compact the sub-grade material on a thickness of 300 mm so that the compaction rates usually required for sub-base (minimum 95% of the maximum dry density) is obtained.

.7 Have each course of the road structure approved prior to the construction of the next course. The surface of each course will be without ruts or other depressions and correct any of the following deviations for the required level: deviation in excess of 30 mm for the infrastructure, deviation in excess of 20 mm for the sub-base and deviation in excess of 10 mm for the base and road base. Any material that has not been approved prior to placement on an underlying layer will not be accepted.

.8 A 50 mm tolerance applies to the theoretical width of the sub-base and base on top of each layer of materials, based on the list of elevations for the road structure handed to the General Contractor at the beginning of construction. If the General Contractor places material in excess of said widths, he will absorb the expense without expecting additional payment. However, if the material placed does not reach the 50 mm tolerance, he will add material until the required theoretical delineation is reached.

.9 The General Contractor will send a written notice to the Site Supervisor indicating the meshing intervals and various courses of materials that need to be validated prior to the placement of the next courses. The General Contractor will notify the Supervisor at least 24 hours in advance, during business days, so that the Supervisor can verify the elevations and widths of the sub-grade and of the various courses constituting the road structure. If the Supervisor provides an answer regarding the requested verification within the 24 hour deadline, the General Contractor will not claim any expense or request extensions regarding the execution schedule.

.10 Following the verification of the parameters mentioned above, the Supervisor will provide a written acceptance of the surface's evenness. The placement of material on a base course that has not been accepted in writing previously is not accepted. If material is placed on a base course that has not been accepted previously, the said material will not be paid unless the General Contractor executes the work again.

3.2 COMPACTNESS OF THE AGGREGATES AT THE CONSTRUCTION SITE

3.2.1 General

.1 Unless otherwise indicated in this item of the specifications, the required compaction rates are as follows:

TABLE 3.2.1-1: REQUIRED COMPACTION RATES

Aggregate	Required Compactness	CCDG
Sub-base		
Material from sand and gravel pits	90% minimum MDD(1) for each course 95% minimum MDD for the last 150 mm under the sub-base line	12.2.3
Crushed material from a quarry or Class 1 excavated material	To the MDD(1) established based on a reference area	
Base		
Material from sand and gravel pits	98% minimum MDD(1) for each course	12.3.3.3
Crushed material from a quarry or Class 1 excavated material	To the MDD(1) established based on a reference area	12.3.3.4 12.3.3.5

(1) Maximum dry density

3.2.2 Aggregates from a sand pit or gravel pit

.1 The density of the aggregates from sand and gravel pits for the base and of the gravel or sand for the sub-base is determined using a moisture density gauge.

3.2.3 MG 20 and MG 56 aggregates from a quarry

.1 Compact the MG 20 and MG 56 aggregates from a quarry to the level determined during the construction of the reference area. The latter will be built before the placement of each 20,000 tons of MG 20 and MG 56 aggregate and whenever the source of procurement changes. Regarding the last placement of material consisting of less than 20,000 tons, a reference area will be built if required by the Engineer.

.2 Build reference areas in accordance of the prescriptions of Articles 12.3.3.5 and 12.3.3.6 of the CCDG using aggregates from a controlled reserve. These reference areas will serve to determine the number of passes to obtain the optimum compaction required at the site and to avoid over-compaction. In that respect, the term "pass" in the context of soil compaction is defined as a single pass of the compaction equipment.

.3 The optimum density of the reference area is defined on the dry density curve measured with a moisture density gauge based on the number of passes, when two (2) consecutive readings confirm an increase of the density lower than 1%.

.4 The Engineer may require the reconstruction of the reference area and a new determination of the optimum density in the following cases:

- The density after compaction no longer reaches the predetermined maximum dry density;
- The density at the site after the set number of passes is no longer that which was determined in the reference area;
- The compaction equipment used to implement the material at the site is different from the equipment used for the construction of the reference area;
- The percentage of material passing through the 5 mm sieve varies by more than 5% from that of the material used in the reference area.

.5 The density will be verified by the Engineer on a regular basis. Moisture density gauge measurements refer to the optimum density determined in the reference area and are used for the acceptance of the work.

3.2.4 MG 112 (112-0) aggregates from a quarry

.1 When usual control methods are applicable, monitoring may be visual (number of tractor and/or roller passes) following experimentation on a reference area at the beginning of the project.

.2 Build a reference area in accordance with the prescriptions of Article 12.3.3.5 of the CCDG based on aggregates from a controlled reserve.

.3 The Supervisor may require the reconstruction of the reference area and the determination of the maximum density in the following cases:

- The compaction equipment used to implement the material at the site is different from the equipment used for the construction of the reference area;
- The particle size of the material varies significantly;
- The bearing capacity of the underlying soil changes.
- If the General Contractor uses aggregates from another source.

.4 After the implementation of the MG 112 aggregates, the exposed surface will look "closed" and will show no sign of segregation.

.5 The General Contractor may use MG 56 crushed stone instead of MG 112 crushed stone for the sub-base. In such cases, the crushed stone will comply with all of the specifications for MG 56 crushed stone. Penalties, if applicable, will be subjected to the penalty system for the MG 56 crushed stone and the material will be paid based on the unit price of the MG 112 crushed stone.

3.3 CRITERA FOR ON SITE ACCEPTANCE AND REVISION OF THE UNIT PRICES OF SUB-BASE MATERIALS

3.3.1 General

.1 The aggregates for the sub-base may consist only of crushed stone. The General Contractor will plan for appropriate crushing equipment and will carry out all of the sieving, crushing and other tasks required to produce aggregates compliant with the specifications.

.2 For the purpose of acceptance at the site, the aggregates will comply in every way with the specifications of this item and with standard NQ 2560-114 "Travaux de génie civil – Granulats, Partie II : Fondation, sous-fondation, couche de roulement et accotement" (civil engineering – aggregates, part II, sub-base, road base and shoulder".

.3 Regarding particle size using a 80 µm sieve, the aggregates for the sub-base will comply with the following:

- The percentage passing for the entire sample through the 80 µm sieve will be lower than 10%.

3.3.2 Areas deemed visually non-compliant

.1 The Owner reserves the right to sample any area deemed visually non-compliant. If the percentage passing for an entire individual sample through the 80 µm sieve is higher than 12%, the General Contractor will remove and replace the aggregate in the area in question at his own expense.

3.3.3 Lot determination

.1 Regarding the sub-base, each lot is approximately 7,500 m² and consists of three (3) samples (each consisting of three samples in random locations) representing three (3) sections of equal size. At the end of a contract, any surface smaller than 1,500 m² will be integrated to the previous lot. The boundaries of the lots will be determined by the Engineer's representative prior to the construction of the sub-base and based on the sequence presented previously by the General Contractor for such work. A lot may consist of more than one course. When the lots are delineated, the General Contractor is informed of the boundaries.

3.3.4 Lot acceptance

.1 For the purpose of the final acceptance of the aggregates, the samples and tests by the Owner will take place immediately after the complete implementation of the course or lot.

.2 The acceptance of the aggregates' particle size is based on the assessment of each lot.

.3 A lot is accepted when the average of three (3) particle size analysis results comply with the 112 mm and 80 µm sieve requirements, while in accordance with item 3.3.6 of this section of the specifications.

3.3.5 Lot rejection

.1 A lot is rejected when the difference between the average of three (3) particle size analysis results and the values specified in this contract exceeds at least one (1) of the critical deviations below:

Critical deviation (112 mm sieve):.....-5%

Critical deviation (80 µm sieve) for the total sample:.....+1%

In such cases, the General Contractor will remove and replace the aggregate in the rejected lot at his own expense or will exercise his right or recourse as per item 3.3.8 of this section of the specifications.

3.3.6 Rejection of individual samples

When the percentage passing through the 80 µm sieve for the individual sample of a given lot is higher than 12% of the total sample, the area represented by this sample is rejected. The General Contractor will then remove all of the aggregates in this area or exercise his right or recourse as per item 3.3.8 of this section of the specifications. In such cases, the number of samples amounts to two (2) (each consisting of three (3) samples from random locations) representing two (2) sections of equal size. If the average percentage passing through the 80 µm sieve is still higher than 12% for the entire sample, the General Contractor will remove all of the aggregates in the area represented by the samples. In addition, this area will be sampled again in new random locations at double the rate and by calculating the average of the two (2) analysis results. The averaged results of the new samples will replace the old results and will be used to calculate the final average for the lot.

3.3.7 Calculation of the revised unit price for a given lot

.1 If the average of the three (3) particle size analysis results for a lot exceeds the specifications of the 112 mm and/or 80 µm sieves, while remaining under or equal to the critical deviations defined for said sieves, the General Contractor will remove and replace the aggregates in the lot at his own expense or he will accept a revision of the unit price based on the following:

CF (112 mm)	=	3 (100 - x)/100
CF (80 µm)	=	45 (x - 10)/100 (total sample)
CF (lot total)	=	CF (112) + CF (80 µm) + CF (variability)
PR)	=	[1 - CF (total lot)] x UP
CF (variability)	=	10 (Y – 6)/100 the maximum value is equal to 0.20)

Where:

x	=	Average for the lot (% passing)
CF	=	Correction factor
RP	=	Revised price
UP	=	Unit price in the price schedule
Y	=	Maximum percentage passing through the 80 µm sieve – Minimum percentage passing through the 80 µm sieve

.2 Withholding of payment for non-compliant aggregates is calculated by multiplying [unit price-revised price] with the affected quantities. Withholding of payment may not be higher than the amount calculated by multiplying the unit price listed in the price schedule with the affected quantities.

3.3.8 General Contractor's recourse

.1 Should a lot fail to satisfy the acceptance criteria listed in item 3.3.4 of this section of the specifications, the General Contractor may use the field samples he has had taken or he may hire an independent laboratory to take and test new samples, and product new results. This independent laboratory will be certified ISO 9002. New sampling and particle size testing will take place during business hours and days.

.2 The sampling location and testing will be determined with a representative of the Engineer in attendance. The General Contractor may assign an observer at his own expense. Any comment on a process or task deemed faulty will be reported immediately and the Engineer will be informed of any divergence.

.3 The General Contractor will submit the new results within seven (7) calendar days following the receipt date of the original results from the Owner or authorized representative, otherwise the General Contractor's right of recourse will be null and void. Six (6) samples will be taken from the reconstructed lot (each sample will consist of three (3) samples) and the new results will be used for the calculation of the final average for the lot.

.4 The Engineer will be provided with an official copy of the test results and of the endorsed manuscripts immediately after testing. The Engineer will assess compliance again and the revised price will be established, if applicable, based on the new test results. The new test results will replace all of the initial results and will become official. The recourse procedure will end there.

.5 The cost of the additional sampling and particle size analysis will be paid by the General Contractor, unless the average value calculated from the new results for the lot indicates that the said lot meets all of the requirements of this contract. In that case, the Owner will reimburse only the cost of the tests based on the rates of the Canadian Testing Association (CTA).

.6 Dust control pertaining to the sub-base will only be carried out using water until compliance is confirmed by the results of the particle size analysis. If the General Contractor applies a dust control liquid other than water prior to the reception of the particle size analysis results, he renounces his right of appeal unless the samples described in this item of the specifications are taken in accordance with the prescriptions of this item of the specifications before the application of the dust control liquid.

.7 If the General Contractor coats the lot aggregates with a substance designed for other uses before the reception of the particle size analysis results for the lot in question, he renounces his right of recourse unless the samples described in this item of the specifications are taken in accordance with the prescriptions of this item of the specifications.

3.4 CRITERIA FOR ON SITE ACCEPTANCE AND REVISION OF THE UNIT PRICES OF BASE MATERIALS

3.4.1 Lot acceptance

.1 To Article 12.3.4 of the CCDG for the MG 20 and MG 56 aggregates with modification to the first paragraph as follows:

Acceptance is controlled by the laboratory hired by the Owner after the complete implementation of each base material lot.

3.4.2 Lot rejection

.1 To Article 12.3.4.1 of the CCDG for MG 20 and MG 56 aggregates.

3.4.3 Calculation of the revised unit price for a given lot

.1 If the results or the averaged particle size analysis results for an lot exceed the specifications of the 5 mm and/or 80 µm sieves while remaining lower than or equal to the critical deviations defined for these sieves, the General Contractor will remove and replace the aggregates of this lot at his own expense or he will accept a revision of the unit price based on the following calculations:

a) 5 mm sieve for the MG 20 aggregates :

CF 5 = 0.08 (m - 60) (if % passing is too high)
CF 5 = 0.08 (35 - m) (if % passing is too low)

b) 5 mm sieve for the MG 56 aggregates :

CF 5 = 0.08 (m - 50) (if % passing is too high)
CF 5 = 0.08 (25 - m) (if % passing is too low)

c) 80 µm sieve for MG 20 and MG 56 aggregates:

CF 80 = 0.40 (m – 7)

d) For the entire lot:

Revised price (RP) = (1 – (CF80 + CF5)) x UP

Where
- m = Average for one lot (% passing)
- F_{c80} = Correction factor for the "80 µm passing" parameter
- F_{c5} = Correction factor for the "5 mm passing" parameter
- RP = Revised price
- UP = Unit price indicated in the price schedule.

.2 Withholding of payment for non-compliant aggregates is calculated by multiplying (UP - RP) with the quantities in question.

3.4.4 General Contractor's recourse

.1 If a lot does not meet the acceptance criteria indicated in item 3.4.1 of this section of the specifications, the General Contractor may use the field samples already taken or he may hire an independent laboratory to establish new sampling locations, proceed with sampling and testing, and produce now results. This laboratory will be certified ISO 9002. New sampling and particle size testing will take place during business hours and days.

.2 The sampling location and testing will be determined with a representative of the Engineer in attendance. The General Contractor may assign an observer at his own expense. Any comment on a process or task deemed faulty will be reported immediately and the Engineer will be informed of any divergence.

.3 The General Contractor will submit the new results within seven (7) calendar days following the receipt date of the original results from the Owner or authorized representative, otherwise the General Contractor's right of recourse will be null and void. Six (6) samples will be taken and the new results will be used for the calculation of the final average for the lot. The Engineer will assess compliance again and the revised price will be established, if applicable.

.4 The Engineer will be provided with an official copy of the test results and of the endorsed manuscripts immediately after testing.

.5 The cost of the additional sampling and particle size analysis will be paid by the General Contractor, unless the average value calculated from the new results for the lot indicates that the said area meets all of the requirements of this contract. In that case, the Owner will reimburse only the cost of the tests based on the rates of the Canadian Testing Association (CTA).

.6 If the General Contractors applies asphalt or any other material prior to the reception of the particle size analysis results, he renounces to his right of appeal unless samples were taken in accordance with the procedure descried in item 3.4.1 of this section of the specifications before the application of the asphalt.

.7 The General Contractor will submit the new results within seven (7) days after sampling, otherwise the Owner will take it that the General Contractor has renounced his right of recourse. The General Contractor will reimburse the expenses incurred by the Owner..

3.5 AGGREGATE PREPARATION PRIOR TO PAVING

.1 The implementation of the road base in accordance with the construction method described in Article 12.3.3 of the CCDG and the preparation of the aggregate course prior to paving as described in Article 13.1 of the CCDG are two (2) distinct operations and the first must be complete before proceeding with the second so that material sampling can take place and particle size analysis results can be received prior to paving, this to permit the application of items 3.1, 3.2, 3.3 et 3.4 of this section of the specifications.

.2 Implement the road base completely and notify the Engineer 72 hours prior to the application of the asphalt.

.3 Prepare a minimum aggregate surface of 2,500 m² before paving. Plan for a delay of four (4) hours before paving so that the Engineer may verify the longitudinal and transvers profiles.

.4 When traffic is to be maintained, apply the asphalt within three (3) business days after the reception of the particle size analysis results for the road base. The days when weather is not favorable as described in Article 13.3.4 of the CCDG are excluded from this execution delay. At the end of this time period, the Engineer may demand that the entire acceptance process related to the aggregates constituting the road base take place again. All of the expenses related to this new process will be paid by the General Contractor and will not be reimbursed.

.5 If the General Contractor applies asphalt prior to the reception of the particle size analysis results for the road base, he renounces his right of recourse as described in item 3.4.4 of this section of the specifications and will comply with items 3.4.1, 3.4.2 and 3.4.3 of this section of the specifications regarding the acceptance or rejection of a lot, even if the removal of the pavement is required.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

Asphalt Pavement
Section 02510

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1. GENERAL

1.1 SCOPE OF WORK

.1 This section completes or modifies the "Cahier des charges et devis généraux", "Infrastructures routières - Construction et reparation" (road infrastructures – construction and repairs").

.2 Provide the labour, equipment and materials necessary to the pre-marking of roadways paved with plant mixes.

.3 Useful sections:

- Excavation and Backfilling, Section 02220.
- Earthworks and Roadworks, Section 02225.
- Pavement Structure, Section 02230.
- Sidewalks and Curbs, Section 02580.

1.2 REFERENCE STANDARDS

.1 "Cahier des charges et devis généraux (CCDG) - Infrastructures routières - Construction et reparation" (road infrastructures – construction and repairs), latest edition :

- Part 2: Section 13 "Revêtement de chaussée en enrobe" (asphalt road pavement).
- Part 3: "Documents de reference" (reference documents), standards 4101 to 4401 and 14 101 as described in "Tome VII – Matériaux" (book VII – Materials) of the "Collection Normes - Ouvrages routiers" (standards collection – road structures) published by the "Ministère des Transports, de la Mobilité durable et de l'Électrification des transports" or MTMDET).

.2 Standard NQ 2560-114 "Travaux de génie civil - Granulats" (civil engineering – aggregates).

.3 In case of conflict between this section and the CCDG, the requirements of this section prevail over any conflicting provisions.

.4 This section is the special specifications referred to in the CCDG.

.5 Notwithstanding the provisions of the CCDG, measuring and payment will be in accordance with the general and supplementary general conditions of these specifications.

.6 "Tome V - Signalisation routière « Ouvrages routiers" (book V – traffic signs "road structures) published by the "Ministère des Transports, de la Mobilité durable et de l'Électrification des transports" or MTMDET.

1.3 DEFINITIONS

.1 Hot mix asphalt: mix of aggregates and bitumen mixed hot at the asphalt mixing plant for application while hot.

.2 Cold mix asphalt: process that produces asphalt at mixing and compacting temperature lower than 30°C as opposed to a hot mix. Cold mix asphalt may be produced through by mixing additives with the bitumen or by foaming the bitumen with water at the asphalt mixing plant.

1.4 MIX FORMULAS

.1 Two (2) weeks prior to the beginning of construction, provide the mixes of all asphalt types for approval. Work will not commence prior to the approval of the mixes.

.2 Regarding warm asphalt, the application technique will be indicated in the mix.

2. PRODUCTS

2.1 PAVEMENT MATERIALS

.1 The bitumen used for the preparation of mixes at the asphalt mixing plant will be in accordance with standard 4101 "Bitumes" (bitumen) of the MTMDET. This is valid for hot mixes and warm asphalt.

The bitumen performance grade (PG) is 52-40.

.2 The aggregate categories used in asphalt mixes are as follows (refer to the NQ 2560-114 standard "Travaux de génie civil - Granulats », partie V : Enrobés à chaud" (civil engineering – aggregates, part V, hot mixes):

TABLE 2.1-1: AGGREGATE CHARACTERISTICS

Aggregates	Characteristics	Base Course*	Surface Course *
Large aggregates	- Natural - Manufactured	3 d	3 b
Fine aggregates	- Natural and manufactured	2	2

3. EXECUTION

3.1 APPLICATION

.1 Apply the asphalt mixes in accordance with the technical specifications of the CCDG and with the items below.

3.2 ADJUSTEMENTS TO CAST IRON ACCESSORIES

.1 Adjust the height of the sewer manholes (standard and adjustable) and catch basins (standard and adjustable) in accordance with the provisions of the NQ 1809-300 standard, Figures 55 to 57 (manholes) and Figures 60 and 61 (catch basins), and corresponding articles. Regarding catch basins, take into account the depths shown on the plans, if applicable.

.2 Regarding self-adjusting accessories, it is important to plan for a thickness of 50 mm between the frame and cone-shaped guiding frame.

.3 Adjust the height of the curb valve boxes at approximately 10 mm under the finished pavement.

.4 The use of concrete rings to achieve the desired manhole adjustment is not permitted.

3.3 CONNECTIONS TO OLD PAVEMENT

.1 Carefully build the joints between the old and the new pavement. The edge of the old pavement will be cut through the entire thickness and covered with an even coat of emulsified bitumen or liquid bitumen so that a neat surface against which the hot mix will be applied and raked to the desired thickness. This cut will be made with a saw or cutter so that the cut will be straight. The location of the cut will be confirmed by the Supervisor prior to cutting.

3.4 OPENING OF THE ROADWAY TO TRAFFIC AND TACK COAT

.1 Only the Engineer may authorize the opening of the roadway to traffic. If traffic is allowed on a given section prior to the application of the top coat, the General Contractor will clean and apply a tack coat at his own expense prior to the application of the next coat. The residual rate is select in accordance with Article 13.2.4 of the CCDG.

3.5 DRIVEWAY ADJUSTEMENTS

.1 In the presence of a curb and when the surface asphalt coating has been applied at least 4 months ago, bevel the asphalt of both edges in each driveway. These bevels will exceed each low section of the driveway by at least 300 mm. The top of the beveled edge will be less than 25 mm from the top of the curb. The slope ratio of the bevel will be at least 1V:10H.

3.6 LONGITUDINAL AND TRANSVERSE JOINTS

.1 The construction of longitudinal and transverse joints is subjected to the following requirements:

- In addition to the requirement described in the first sentence of the fourth paragraph of Article 13.3.4.3 of the CCDG, when the temperature of the joint is lower than 85ºC, the joint will be heated using appropriate equipment (infrared or equivalent). Heating with exposure to a direct flame is strictly prohibited.
- When heating the joint, the General Contractor will pay particular attention to avoid undue hardening of the bitumen and affecting the bitumen low service temperature.

.2 The General Contractor will build longitudinal joints very carefully so that the compactness of the longitudinal joint between the asphalt strips is compliant. During the work, the Owner reserves the right to test the compactness of the joints between the asphalt strips using a moisture density gauge as per the following procedure:

- At each verification site, a test with a moisture density gauge will be carried out on each side of the joint. The emitting source (or handle) will be placed less than 150 mm from the joint. The moisture density gauge will be placed longitudinal to the roadway, in a stable position in good contact with the surface of the roadway. If the moisture density gauge is not stable, it is to be moved longitudinally until it is stable on the pavement's surface. A single test will consist of three readings (30 seconds in backscattering) without moving the device.
- Using the moisture density gauge, the Supervisor will survey the first 100 meters and read the capacity of the freshly rolled asphalt. If the measured compactness is above 90.0%, the subsequent reading rate will be every 250 meters. If compactness is lower than 90%, the General Contractor will be notified and will take appropriate action to achieve the compactness required.

- If the first radiation-type densimeter reading shows non-compliance, the Supervisor will take a second reading within 125 meters after the first reading. If this second reading is lower than 90%, the Supervisor will mark the location and a core sample will be taken to determine compactness in accordance with the LC 26-040 testing method.
- Confirmation of compactness lower than 90% for the core sample will result in a permanent withholding of payment to the amount of two thousand dollars ($2,000). This procedure will be repeated every 250 meters and additional sums of two thousand dollars ($2,000) will be permanently withheld for each non-compliance.
- An additional penalty of $10/linear meter will be applied for any joint that is not compliant, showing signs of segregation and/or opening, if it is not repaired to the satisfaction of the Owner. The correction method will be approved by the Supervisor.

.3 A sum of four thousand dollars ($4,000) will be withheld for each transverse joint that is not compliant with Article 13.3.4.3 of the CCDG until the General Contractor corrects said joints so that it is acceptable. The correction method will be approved by the Supervisor.

The special withholding of payment will become permanent if no satisfactory corrective action has been taken at the final acceptance milestone.

4. VERIFICATION

4.1 COMPLIANCE

.1 During the verification of the mixes, if quality fail to comply with the requirements, Articles 13.2.2 and 13.3.2 of the CCDG will be apply.

.2 In case of non-compliance, the Engineer reserves the right to have the mix replaced at the General Contractor's expense and/or to withhold payment permanently based on the following terms if he average compactness ranges between 91% and 93%.

.3 Withholding of payment for non-compliant pavement in terms of compactness is obtained by multiplying the correction factor by the price of the mix and by the targeted quantities:

Withholding of payment = Quantity x UP x Correction factor

UP: Unit price of the mix including materials, manufacture, transportation and application.

Correction factor: 0.125 (93.0 – D)

D: average compactness of the lot rounded to the nearest tenth.

4.2 SAMPLING

.1 Sampling and core drilling will be carried out in accordance with the requirement and speed indicated in the CCDG. The minimum number of samples or core drillings for one lot has been set at two (2).

.2 Contrary to the indications of Article 13.3.2.2.5 du CCDG, when re-assessing the compactness should paving be deemed non-compliant, the General Contractor is held responsible for the hiring of an independent ISO-9002 certified laboratory approved by the Owner to determine the compactness again. The General Contractor will also pay for the expenses incurred unless the reassessment confirms that the compactness of the pavement is compliant. Should the reassessment confirm compactness compliance, the Owner will reimburse the expenses related to the laboratory services based on the rates of the Canadian Testing Association (CTA).

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

Sidewalks and Curbs
Section 02580

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1. GENERAL

1.1 SCOPE OF WORK

.1 Supply the labour, equipment and materials required for the construction of the following structures:

- Cast-in-place concrete sidewalks;
- Granite curbs;
- Molded-in-place concrete curbs;
- Cast-in-place concrete curbs;
- Prefabricated concrete curbs.

.2 Execute the following work in accordance with the plans and specifications or as instructed by the Engineer.

1.2 RELATED WORK

.1 Earthworks and Roadworks, Section 02225.

.2 Pavement Structure, Section 02230.

.3 Asphalt pavement, Section 02510.

1.3 REFERENCE STANDARDS

.1 "Cahier des charges et devis généraux, Infrastructures routières - Construction et reparation" or CCDG (general conditions, road infrastructures – construction and repairs), latest edition :

- Part 2: "Devis généraux, section 18, Éléments de sécurité" (general specifications, section 18, safety elements), sub-sections 18.1 to 18.4.
- Part 3: "Documents de référence, section "Liste des normes du Ministère" (reference documents, section "list of ministry standards); standards 3101, 3501, 5101 and 14201 in "Tome VII – Matériaux" in "Collection Normes - Ouvrages routiers du ministère des Transports du Québec" (book VII – Materials, in the standards for the construction of roadways published by the "Ministère des Transports, de la Mobilité durable et de l'Électrification des transports" (the Quebec government authority on transportation).

.2 The NQ 1809-500 standard, "Travaux de construction - Trottoirs et bordures en béton" (construction work – Concrete sidewalks and curbs).

.3 The NQ 2520-110 standard, "Bordures de granite" (granite curbs).

.4 The NQ 2560-114 standard, "Travaux de génie civil - Granulats" (civil engineering – aggregates).

.5 The NQ 2624-210 standard, "Bordures en béton préfabriquées - Caractéristiques dimensionnelles géométriques et physiques" (prefabricated concrete curbs – geometric, dimensional and physical characteristics).

.6 In case of conflict between this section and the CCDG, the requirements of this section prevail over any conflicting provisions.

.7 This section is the special specifications referred to in the CCDG.

.8 Notwithstanding the provisions of the CCDG, measuring and payment will be in accordance with the general and supplementary general conditions of these specifications.

1.4 PROFILES AND ALIGNMENTS

.1 At his own expense, the General Contractor will establish the profiles and alignments based on levels and markings indicated on the plan by the Engineer and in accordance with item "Alighements et niveaux" (alignments and levels) of the general conditions (NQ 1809-900-II/2002) and with the following.

.2 Respect the following procedure for the implementation of the alignments and levels:

- Determine the alignments, levels and markings for sidewalks, curbs or shoulders every ten (10) meters maximum, at the low and high points of the vertical layout and for catch basins that must be preserved and/or planned, based on the profiles and superelevations indicated on the plans;
- Make a verification with the Engineer in order to optimize the profile of the finished grade in order to adapt to existing conditions, while taking into account existing buildings, driveways, and the drainage of existing streets and catch basins marked for preservation;
- If applicable, produce a list of the new elevations with the Engineer;
- If applicable, modify or correct the alignments, levels and markings, while taking into account the list of new elevations.

2. PRODUCTS

2.1 MATERIAL

.1 Structural steel: billet steel, high adhesion, in accordance with the CAN/CSA G30.18 standard, grade 400R, unless otherwise indicated.

.2 Cement concrete: in accordance with standard 3101 in "Tome VII – Materiaux" of the Quebec government authority on transportation and the NQ 2560-114 standard "Partie IV - Béton de asse volumique normale" (part IV – normal density concrete) of the "Bureau de normalisation du Québec", and more specifically with the following characteristics:

- Cast-in-place sidewalks and curbs:
  - Type of concrete : Gub-SF
  - Compressive strength at 28 days : 35 MPa
  - Slump : 80 mm ± 30 mm
  - Air entrainment : 5-8%
  - Aggregate gauge : 20-5 mm, granitic
  - Provide, for approval, documents demonstrating that the aggregate used will not be affected by the alkali-silica reaction.

– Molded concrete curbs:

- Type of concrete : Gub-SF
- Compressive strength : 35 MPa
- Slump : 30 mm ± 20 mm
- Air entrainment : 5-8%
- Aggregate gauge : 20-5 mm, granitic
- Provide, for approval, documents demonstrating that the aggregate used will not be affected by the alkali-silica reaction.

.3 Aggregates for foundations: in accordance with Section 02230 of the supplementary technical conditions and with standard NQ 2560-114, Part II, from the "Bureau de normalisation du Québec".

.4 Mineral wool:

Minimum thickness	:	75 mm
Minimum coefficient	:	R-15

.5 Polyethylene sheets: in accordance with the ASTM C171 standard.

Minimum thickness	0.10 mm
Minimum width	1.0 m

.6 Curing agent in accordance with the ASTM C309 standard.

.7 Asphalt expansion joints: in accordance with the ASTM D1751 standard.

3. EXECUTION

3.1 GENERAL

.1 Build sidewalks and curbs before the shaping and preparation of the asphalt pavement.

.2 Five (5) days prior to concrete placement, provide the formula of the cement concrete mix for approval, as well as the particle size analysis results for the aggregates to be used.

.3 Determine the levels and alignments as indicated on the plans. When working in existing streets, correct the theoretical levels and alignments in order to adapt to local conditions (private sidewalks, car ramps, etc.).

.4 Protect existing private properties and structures. Repair at your own expense any additional damage caused by the normal execution of the work.

.5 Make all necessary excavations for the sidewalk and curb base course.

.6 Remove all waste, vegetation, etc. from the base course.

.7 Build the cushions as indicated on the plans. Compact the base courses at 98% of the maximum dry density. Moisten the cushion so that it does not absorb the water in fresh concrete.

.8 Any concrete additive will be paid for by the General Contractor. The use of said additives will be approved by the Engineer prior to use.

.9 The use of vibrators to place concrete is not permitted.

.10 Concrete at a temperature higher than 30°C will not be placed.

.11 Concrete will not be poured on a frozen base course.

.12 Cover all apparent fresh concrete surfaces with a curing agent. Apply the curing agent when the concrete is still wet or two (2) hours maximum after concreting. The curing agent will have been approved previously and application will be as recommended by the manufacturer. Cover the concrete with a polyethylene sheet for at least seventy-two (72) hours.

.13 Take every precaution to protect the curbs and sidewalks from heavy rain, pedestrian traffic, vehicular traffic or other damage-causing situations.

.14 Plan to have enough polyethylene sheets to cover all of the sidewalk or where concrete has been poured during the last eight (8) hours.

.15 Use compaction tools near curbs or sidewalks carefully and only once the compressive strength of the concrete will be at least 20 MPa or five (5) days after the placement of the concrete.

.16 Make a construction joint at the end of each work day or if work is interrupted for more than one (1) hour. Make the joint by ending the molding of the concrete perpendicular to the curb's axis by placing two (2) smooth dowels, in preparation of concreting.

.17 Leave the forms for a minimum of 24 hours and cover immediately with aggregates on a 300 mm wide surface after the removal of the forms.

.18 The General Contractor will take every action necessary to protect the sidewalks, curbs and lateral islands against any damages or spills caused by residential and/or commercial traffic, until paving is complete (temporary backfilling, etc.).

.19 If the General Contractor is authorized to install prefabricated curbs, he will use prefabricated curbs of the continuous raised type for commercial entrances. These curbs will be installed so that their bottom will be at the same elevation as the curbs adjacent to the commercial entrances.

.20 During work in cold weather (less than 10^{o} C), protecting the concrete might be necessary and mandatory. Refer to item 3.8 of this section of these specifications.

.21 If honeycombs, imperfections deemed important by the Client or his representative or excessive cracking are present, the General Contractor will correct these defects using one of the following methods (without limitation): surface or localized repairs or the removal and reconstruction of the defective sidewalk and curb sections.

3.2 SIDEWALKS

.1 Build sidewalks in accordance with the NQ 1809-500 standard and with the plans and specifications.

.2 The use of steel forms is mandatory. They will be held in place using stakes and pins in order to ensure straight lines and even profiles. The sidewalks will not deviate from the prescribed alignment and profile by more than 6 mm. Any section with irregularities exceeding 5 mm over a distance of 3 m will be rebuilt at the General Contractor's expense (CCDG, Article 18.1.3).

.3 When building a sidewalk with a monolithic curb (sidewalk haunch), prepare the base course of the sidewalk including space for the haunch, fill the haunch area with aggregate up to the top of the sidewalk's foundation, compact, excavate the space required for the sidewalk haunch without disturbing the compaction outside of the haunch area.

.4 When specified in the price schedule and prior to concrete placement, install metal mesh netting on seats spaced every 600 mm and 100 mm from the surface.

.5 Place fresh concrete on the based inside the form and tamp. Place concrete 10 mm higher than the sidewalk's surface for levelling.

.6 Build transverse recessed joints every 1.5 m using a 3 mm wide and 40 to 50 mm deep saw kerf (depth between ⅓ and ¼ of the sidewalk's thickness). Make sure that the joints are perpendicular to the sidewalk's longitudinal axis. The kerf will be make within 8 to 24 hours after concreting, as soon as the concrete surface is hard enough to withstand crumbling.

.7 Build expansion joints every 6.0 m and at critical locations, i.e. where posts, post hydrants, curb valve boxes, sidewalk intersections, driveways, etc. are located. Build expansion joints using 12.5 mm thick asphalt expansion joints. The height of the joints will be 12 mm lower than the sidewalk's thickness at the location of the joint. Regarding sidewalks with monolithic curbs, the asphalt expansion joints will be 25 mm from the front of the haunch, and a kerf will be made on the full height after the initial setting of the concrete. Make sure that the joints are perpendicular to the sidewalk's longitudinal axis.

.8 Insulate the sidewalk from all posts, post-hydrants, curb valve boxes, catch basins, walls and other structures using a 12,5 mm asphalt expansion joint (control joint).

.9 Build sidewalks to create a 2% slope toward the street unless indicated otherwise. When the sidewalk's longitudinal slope creates a hazard for pedestrian traffic (slope higher than 5%), trace perpendicular grooves on the surface every 75 mm (each 5 to 10 mm in width, 10 mm deep).

.10 Finish with a wood trowel and brush. Avoid excessive polishing that would create a low resistance surface. Do not add water to facilitate troweling. Remove excess water delicately before finishing.

.11 In cold weather, refer to item 3.8 of this section of the specifications. The General Contractor will at least supply and install a mineral wool mattress and polyethylene sheets to cover and protect the mineral wool.

.12 Remove the mineral wool and the polyethylene sheets only after 72 hours, but five (5) days after the end of concrete placement at the latest.

3.3 CAST-IN-PLACE CONCRETE CURBS

.1 Cast-in-place concrete curbs will be accepted only in the following instances:

- Over small distances;
- To connect to existing structures;
- For specific radiuses;
- To provide clearance for sliding forms.

.2 Build the curbs in accordance with the NQ 1809-500 standard.

.3 Build curbs in straight lines with a continuous profile, in accordance to the typical plans, especially regarding the slope of the exterior face (street side) and fillets and radiuses. The curbs will not deviate more than 6 mm from the prescribed alignment and profiles. Any section with irregularities exceeding 5 mm over a distance of 3 m will be rebuilt at the General Contractor's expense (CCDG, Article 18.1.3).

.4 Unless otherwise indicated on the plans, control joints (saw kerfs) will be built every 6 m, and be 100 mm deep, on the top part of the curb. Expansion joints will be built every 24 m and will consist of a saw kerf on the entire thickness of the curb. Make the kerfs immediately after the removal of the curb forms.

.5 Make a control joint using an asphalt expansion joint around every obstacle to the curb (wall, foundations, catch basin, valve box, post-hydrant, etc.).

.6 After the installation of the forms in accordance with the required levels and alignments and based on the marks provided by the Engineer's representative, the fresh concrete will be poured on the base inside of the forms and tamped adequately. The top of the curb will then be levelled.

3.4 MOLDED-IN-PLACE CONCRETE CURBS (USING FORMS)

.1 Use a slip form curbing machine with built-in vibrators specifically designed for molded-in-place curbs. Use a mold with a geometry in accordance to the plans.

.2 Build the cubs in a straight line with a continuous profile. The molded-in-place curbs will not deviate more than 6 mm from the prescribed alignments and profiles. Any section with irregularities exceeding 5 mm over a distance of 3 m will be rebuilt at the General Contractor's expense (CCDG, Article 18.2.3).

.3 Correct the surface irregularities, finish exposed surfaces with a broom.

.4 Build control joints every 6 m by making a 100 mm deep horizontal saw kerf on the top of the curb. Build expansion joints every 24 m by making a saw kerf on the full thickness of the curb. Make the kerfs immediately after the initial setting of the concrete, before the shrinkage crack occurs.

.5 Build a construction joint at the end of every work day or when work is stopped for more than 1 hour. Make the joint by ending concrete molding perpendicular to the curb's axis and by placing two (2) smooth dowels in the concrete in anticipation of work continuation.

.6 In the presence of obstacles, such as posts, stop the molding of the curb and continue the curb using fixed steel form and make a control joint around the obstacle. This constraint will be included in the price submitted for the curbs.

3.5 BACKFILLING

.1 Backfill the curbs and sidewalks in accordance with the requirements of the plans and typical drawings.

.2 Use materials in accordance with Part Ii of the NQ 2560-114 standard from the "Bureau de normalisation du Québec".

.3 Repair all surfaces affected by the work, including the connections to existing structures (grass sodding, private entrances, sidewalks, curbs, stairs, walls, etc.). Repairs are no limited to a set distance to the back of sidewalks or curbs.

3.6 PROTECTION IN COLD WEATHER

.1 Concrete protection in cold weather is required when concrete temperature may drop below 10°C and/or when the Engineer deems that the temperature will drop to that level within the next 24 hours following placement.

.2 Comply with standard NQ 1809-500, Part 8 "Bétonnage par temps froid" (concreting in cold weather).

.3 Comply with the requirements of the CCDG (Article 15.4.3.8 and sub-articles), and with the special provisions included in the supplementary general conditions of these specifications.

.4 Regarding payment, refer to the requirements of these specifications, to the requirements of the CCDG, Article 15.4.4.9 and other articles, as well as with the provisions included in the supplementary general conditions.

4. VERIFICATION

.1 The verification of the concrete cement materials will be in accordance with sub-section 15.4 "Ouvrages en béton" (concrete structures) of the CCDG.

.2 If the compressive strength of the cement concrete is not compliant, Article 15.4.4.5.1 of the CCDG will apply.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

SUPPLEMENTARY TECHNICAL CONDITIONS

Road Construction Signage
Section 02847

TETRA TECH QI INC.
4655 Wilfrid-Hamel Boulevard
Quebec City (Quebec) G1P 2J7

Tel.: 418 871-8151
Fax: 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE: 34469TT

TABLE OF CONTENT

1. GENERAL

1.1 SCOPE OF WORK

.1 Supply labour, equipment and material required to maintain traffic and provide relevant road construction signs.

1.2 REFERENCE STANDARDS

.1 "Cahier des charges et devis généraux (CCDG), Infrastructures routières - Construction et reparation" (general conditions, road infrastructures, road construction and repairs):

- Part 2: Section 10.3 "Maintien de la circulation et signalisation" (traffic maintenance and road signs).

.2 Highway Safety Code (L.R.Q., c. C-24.2).

.3 "Tome V : Signalisation routière" (book V: Road Signs) of the standards included in the publication entitled "Ouvrages routiers" (road structures) of the "Ministère des Transports, de la Mobilité durable et de l'Électrification des transports" or MTMDET (the Quebec government authority on transportation).

.4 In case of conflict between this section and the CCDG, the requirements of this section prevail over any conflicting provisions.

1.3 MEASURING AND TERMS OF PAYMENT

.1 Measuring does not apply to work related to construction road signs.

.2 Plan for the cost of construction road signs in the general expenses and provide a breakdown based on contract unit prices or lump sums.

2. PRODUCTS

.1 To the Quebec Highway Safety Code (L.R.Q., c. C-24.2, art. 289).

3. EXECUTION

.1 To Article 10.3.5 "Mise en œuvre" (implementation) of the CCDG.

.2 Two (2) weeks prior to construction, provide signaling plan that will be used during construction.

END OF SECTION

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

LIST OF PLANS

TETRA TECH QI INC.
4655, Wilfrid-Hamel boulevard
Quebec City (Quebec) G1P 2J7

Tel. : 418 871-8151
Fax : 418 871-9625

JUNE 2018
TETRA TECH QI INC. REFERENCE : 34469TT

DESSIN #	DESCRIPTION
V-001	Meskino “A” – Plan and profile views – Ch. : 1+600 à 2+000
V-002	Meskino “B” – Plan and profile views – Ch. : 1+500 à 0+740

CREE NATION GOVERNMENT

PAVING OF INTERNAL ROADS – MESKINO "A" ET "B"
EASTMAIN

TENDER FORM

TETRA TECH QI INC.
4655, Wilfrid-Hamel boulevard
Quebec City (Quebec) G1P 2J7

Tel. : 418 871-8151
Fax : 418 871-9625

JUNE 2018
TETRA TECH QI INC. RÉFÉRENCE : 34469TT

TETRA TECH

CREE NATION GOVERNMENT

PAVING OF INTERNALS ROAD - EASTMAIN

TETRA TECH REFERENCE : 34469TT

TENDER FORM

I (we) undersigned declared that :

Having carefully reviewed the plans, specifications and others specifications for this tender;

Having obtained all the information necessary for the preparation of this tender;

Having taken knockledge of all local conditions and having carefully examined all the articles that could possibly affect the execution of the work of this project;

We hereby propose to execute, for the account of the CREE NATION GOVERNMENT, all the work described in the specifications of this tender and shown on the plans, in accordance with the requirements of the said specifications and plans as well as all the work inherent in the project but not specified in the said specifications and plans and this, at the following price detailed in the tender form page 2 of 3.

_____ _____ $

I (we) declared having read the addenda(s) following :

No : _____ Date : _____ No : _____ Date : _____
No : _____ Date : _____ No : _____ Date : _____
No : _____ Date : _____ No : _____ Date : _____
No : _____ Date : _____ No : _____ Date : _____

_____
Tenderer name

_____
Adress

_____

_____ _____
Date

_____ _____
Phone Authorized signature (s)

Project name
CREE NATION GOVERNMENT **Paving of internals road - Eastmain**

Project number	
TETRA TECH :	34469TT
révision	**date**
	June 2018

PRICE SCHEDULE

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Part	Description	Total
1.	MESKINO "A" ET "B"	$
2.	Monetary compensation for non-compliance with the execution schedule and others (see description of the price schedule items)	
	SUBTOTAL :	$
	GST 5% :	N/A
	QST 9,975% :	N/A
	GRAND TOTAL (bid total)	**$**
	(report to page 1 of 3)	
	CREE CREDIT (to subtract)	$
	ADJUSTED TOTAL CONSIDERING CREE CREDIT (for bid evaluation purposes only)	$

Company name of the tenderer _____ Signature of the representative _____ Date (YY/MM/DD) _____

Project name	Project number
CREE NATION GOVERNEMENT **PAVING OF INTERNALS ROAD - EASTMAIN**	TETRA TECH : 34469TT **revision** / **date** June 2018

Part	**1. - MESKINO "A" ET "B"**

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Item	Description	Quantity	Unit	Unit price	Total
1.	**MESKINO "A" ET "B"**				
1.1	Work site organization and signage		global		$
1.2	Roadworks (2019) :				
	- Decontamination and gradding	4900	m²	$	$
	- MG 20 granular material (50 mm thickness)	275	m³	$	$
1.3	Concrete curbs (2019)	1120	m	$	$
1.4	Paving works :				
	- Aggregate production (2018)		global		$
	- Ashphalt type ESG-14 (70 mm thickness) (2019)	820	ton	$	$
1.5	Site and private driveways restoration (2019) :				
	- MG 20 granular material	20	m³	$	$
	Total 1. - MESKINO "A" ET "B"				**$**
	(report to page 2 of 3)				

Company name of the tenderer

Signature of the representative

Date (YY/MM/DD)